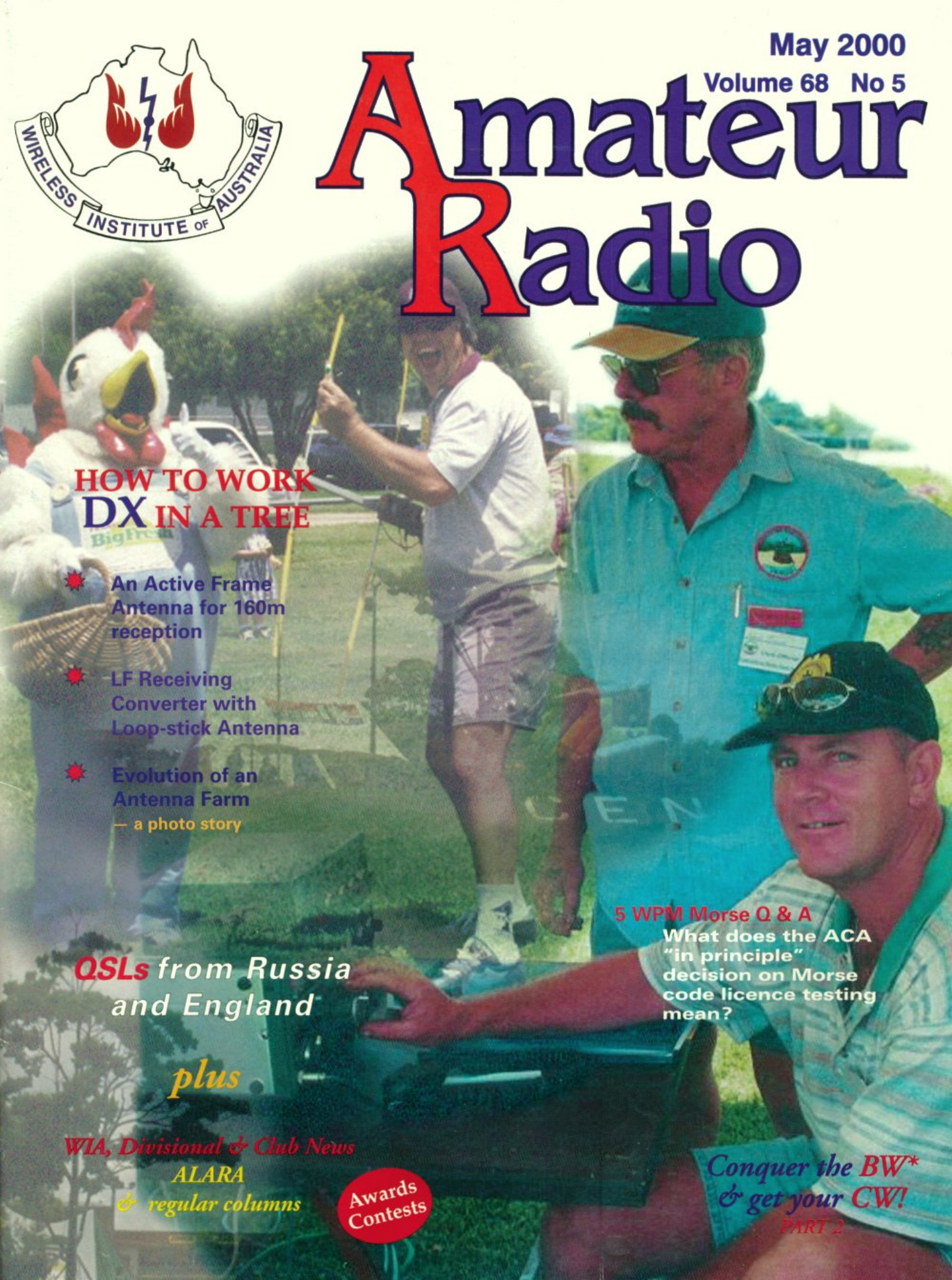
May 2000
Volume 68 No 5

Amateur Radio



HOW TO WORK DX IN A TREE

- An Active Frame Antenna for 160m reception
- LF Receiving Converter with Loop-stick Antenna
- Evolution of an Antenna Farm — a photo story

5 WPM Morse Q & A
What does the ACA "in principle" decision on Morse code licence testing mean?

QSLs from Russia and England

plus

WIA, Divisional & Club News
ALARA
& regular columns

Awards Contests

Conquer the BW & get your CW!*
PART 2

WIA Yearbook 2000

Callbook Listings
Frequency Listings
Band Plans
Repeater Lists
Beacon Lists
Satellite Lists
Licence Conditions
Examiner Lists
Special Interest Groups
Public Relations Notes
Radio and TV Freqs.
and much, much more!

2000 is a great year to have an up-to-date call book. This YEARBOOK edition contains all of the content you have come to expect of the WIA callbook as well as some new items

It is more than a callbook, it's a Yearbook, the WIA Yearbook!

The "WIA Yearbook 2000" is now available from Divisional Bookshops and selected outlets

Amateur Radio

The Journal of the Wireless Institute of Australia

ISSN 0002-6859

Volume 68
Number 5
May 2000

Editorial

Editor: Colwyn Low VK5UE
edarmag@chariot.net.au

Technical Editor: Peter Gibson VK3AZL

Publications Committee Members
Ron Fisher VK3OM
Don Jackson VK3DBB
Evan Jarman VK3ANI
Bill Rice VK3ABP
Gil Sones VK3AUI

Advertising

Mrs June Fox,
Tel: (03) 9528 5962

Hamads

"Hamads" *Newsletters Unlimited*
29 Tanner Street, Richmond VIC 3121
Fax: (03) 9428 4242
e-mail: *newsl@webtime.com.au*

Office

10/229 Balaclava Road
Caulfield, Victoria
Telephone (03) 9528 5962
Facsimile (03) 9523 8191
Business Hours 9:30am to 3:00pm weekdays

Postal

P.O. Box 2175
CAULFIELD JUNCTION
VICTORIA 3161
AUSTRALIA
e-mail: armag@ hotkey.net.au

Production

Newsletters Unlimited (03) 9428 3458

Printer

Streamline Press, Melbourne (03) 9417 2766

Postal Service

IMS (03) 9291 5888

Production Deadlines

Advertising booking and articles for publication 10th of proceeding month.

Hamads and advertising material deadline 18th day of proceeding month

General

Technical

Columns

Our cover this month

From serious to frivolous, Field Days are great days out for all the family. WIA Qld has supplied these snapshots

Contributions to Amateur Radio
Amateur Radio is a forum for WIA members' amateur radio experiments, experiences opinions and news. Manuscripts with drawings and or photos are always welcome and will be considered for publication. Articles on disc or email are especially welcome. The WIA cannot be responsible for loss or damage to any material. A pamphlet, How to write for Amateur Radio is available from the Federal Office on receipt of a stamped self-addressed envelope.

Back Issues
Back issues are available directly from the WIA Federal Office (until stocks are exhausted) at $4.00 each (including postage within Australia) to members.

Photostat copies
When back issues are no longer available, photocopies of articles are available to members at $2.50 each (plus an additional $2 for each additional issue in which the article appears).

Disclaimer
The opinions expressed in this publication do not necessarily reflect the official view of the WIA and the WIA cannot be held responsible for incorrect information published.

Amateur Radio Service

A radiocommunication service for the purpose of self-training, intercommunication and technical investigation carried out by amateurs; that is, by duly authorised persons interested in radio technique solely with a personal aim and without pecuniary interest.

Wireless Institute of Australia

The world's first and oldest
National Radio Society
Founded 1910

Representing
The Australian Amateur Radio Service

Member of the
International Amateur Radio Union

Registered Federal Office of the WIA
10/229 Balaclava Road
Caulfield North Vic 3161
Tel: (03) 9528 5962 Fax (03) 9523 8191
http://www.wia.org.au

All mail to
PO Box 2175 Caulfield Junction VIC 3161

Business hours: 9.30am-3pm weekdays

Acting Federal Secretary

Peter Naish VK2BPN

Federal Office staff

June Fox Bookkeeper
Rita Trebilco VK3IF Examinations Officer

Council

President	Peter Naish	VK2BPN
VK1 Federal Councillor	Glenn Dunstan	VK1XX
VK2 Federal Councillor	Michael Corbin	VK2YC
VK3 Federal Councillor	Brenda Edmonds	VK3KT
VK4 Federal Councillor	Ross Marren	VK4AMJ
VK5 Federal Councillor	David Box	VK5OV
VK6 Federal Councillor	Will McGhie	VK6UU
VK7 Federal Councillor	Phil Corby	VK7ZAX

Executive

Peter Naish	VK2BPN
Tony Farrow	VK2TJF
John Loftus	VK4EMM
Wally Howse	VK6KZ

Federal Coordinators

AMSAT	Graham Ratcliff	VK5AGR
ARDF	Jack Bramham	VK3WWW
Awards	John Kelleher	VK3DP
Contests	Ian Godsil	VK3DID
Education	Brenda Edmonds	VK3KT
FTAC	John Martin	VK3KWA
Historian	John Edmonds	VK3AFU
IARU	Grant Willis	VK5ZWI
Intruder Watch	Gordon Loveday	VK4KAL
ITU Conference and study group	David Wardlaw	VK3ADW
Public Relations	David Thompson	VK2NH
QSL Manager (VK9, VK0)	Neil Penfold	VK6NE
Videotapes	Don Bland	VK4TVD

ACA Liaison Team

Peter Naish	VK2BPN
Glenn Dunstan	VK1XX
Michael Corbin	VK2YC
Wally Howse	VK6KZ

Canberrra Liaison Officer

Richard Jenkins VK1RJ

EDITORS COMMENT

Post Problems

This month I have been delving into how Australia Post gets AR to you. AR is transmitted as Print Post and as such is held until all the First Class mail is loaded before it is used to fill the available load space. The primary movement is from Melbourne to the other State Capitals. The times quoted are 2 days around Melbourne, 3 days to Sydney, Canberra, Adelaide, 4 days Hobart, Brisbane and 5 days Darwin and Perth. These are working days. Distribution to local centres and then your post box takes ? My copy of April AR arrived 17th April. The posting was picked up by Australia Post on Thursday 6th April. We are asking more questions of Australia Post.

More Morse

5 wpm Morse code is still news and we have Q and A on licence qualifications and spectrum in this issue from John Linton. The answers have been checked with the ACA.

Use it or lose it

The Winter Sprint season is upon us. Cheers and groans from selected sections of the amateur community. I was interested to see AHRS is considering cancellation of The Australasian Sprints next year due to lack of support. Groans and cheers. What I would like to know is does this just mean an activity has outlived its usefulness and those who no longer participate are doing something else in Amateur Radio or are we all getting tired. I still get a kick out of what happens when I turn my FT101E on at night. On 21st April I was listening around and heard a pile up KG4VL ? So I put the heaters on, tuned up into my 132' wire, waited till the next roar of unanswereds died away and called. Straight back 59. No one else answered my calls in the next 30 minutes. Funny things happen all the time. If you are not there you miss it. We are seeing VHF/UHF spectrum being allocated to other uses and Amateurs being excluded from sections of spectrum we share. If we do not have a presence and do not let the ACA see we are making use of our allocations, it is inevitable we will lose more of our current allocations. We are in a USE IT OR LOSE IT situation.

Editorial opinion

I notice that I can get quoted by other news providers, so please remember the Editor's Notes are just that, my thoughts, and do not carry any official WIA authority or approval. Further AR cannot be more up to date than two weeks at best and four or five is more likely, AR is in these cases a Journal of record.

Something interesting? Tell us

Lastly I have no desire to be the last editor of Amateur Radio Magazine, but if there is nothing to publish there will be no AR. I would like to be able to construct issues on a theme but all I can do is select from a diminishing selection of submitted articles. I need technical and general articles and photographs for the cover and elsewhere in the magazine. Please see if you can motivate yourself or someone else with knowledge of a good technical topic or an interesting event to write an article for AR.

Action for the month

Take a sheet of paper and write on it why you are a Radio Amateur. Then write what you are doing to keep the hobby alive for you and others.

73 Colwyn VK5UE

New WIA Members

The WIA bids a warm welcome to the following new members who were entered into the WIA Membership Register

FEBRUARY 2000

L10174	MR M S FRANCIS	VK1NPM	MR P L MACARTHUR
L10175	MR D G K KINNON	VK5ZMH	MR R J MITCHELL
L50000	MR P A SIMMONDS	VK6TT	MR R J BURDEN

MARCH 2000

L41025	B McALEER	L41026	J R ANDERSON
VK4CV	N C COOPER	VK4VLC	S MOWATT

WIA News

Compiled by Richard Murnance VK2SKY
Federal News Coordinator

VK: 5wpm Morse to get full HF bands by "mid-year" ZL follows suit

The Australian Communications Authority has accepted a proposal from the Wireless Institute of Australia that effectively reduces to 5 words per minute the Morse Code test speed required for full access to the HF Amateur bands.

Following similar moves in the USA and UK, late last year the WIA State Divisions reviewed their policies regarding the Morse Code test, while the WIA/ACA Liaison Committee discussed the possibility of the change with the ACA.

In early March the WIA State Divisions agreed unanimously to propose that full HF privileges be granted to those who pass the five wpm Morse test (plus the usual theory and regulations tests), and this week the ACA accepted the WIA's proposal.

The full text of the WIA's proposal regarding the Morse Code requirement can be found at http://www.wia.org.au/Issues/5 wpm Morse Proposal.pdf

On 30th March, the Radio Spectrum Management Group notified the New Zealand Amateur Radio Transmitters of similar proposed changes to the ZL Amateur Radio licence conditions. See http://www.nzart.org.nz/nzart/update/changes.html

WIA moves for amateur primary status on full six metre band

Band I television services will cease operation on 9 September 2008, and that the spectrum presently occupied by TV channels 0, 1 and 2 will be withdrawn from the Broadcasting Service and reallocated to other services.

The WIA has placed on record a formal submission for the return of the band 50 - 52 MHz to the Amateur Service, under the same licence conditions that apply at present to the 52 - 54 MHz band.

In support of this request, the WIA has raised the following points:

1. Apart from the current Australian footnote, the entire 50 - 54 MHz band is listed as exclusive amateur spectrum in the ITU frequency allocation tables for Regions II and III. In Region I, Band I television is also being phased out and most countries now have a 50 MHz amateur band.
2. The 50 MHz band is important to the Amateur Service because it provides unique opportunities for propagation experiments. All

continued next page

Comment

WIA Federal President, Peter Naish VK2BPN

IARU preparing for important changes

By the time you receive this issue of "Amateur Radio" the Annual Convention of WIA will have been held in Melbourne. It is the once a year opportunity for the Federal Council to get together over a weekend to discuss and formulate national policy.

This year the major item for discussion is the large number of submissions prepared for the IARU Region 3 meeting in Darwin during August.

As I mentioned in one of my earlier reports to you, the IARU is preparing for the possibility of some very important changes, at the WRC scheduled for 2002 or 2003, to the basis of the amateur radio service worldwide.

In particular there is the likelihood of a total recast of the arrangement under which amateur radio is allowed. Part of this will be the role that Morse Code plays in the qualification needed for an amateur licence.

There may be changes to the bands available to the amateur service. At the WIA Convention your Federal Council will be conscious of the need to develop a strong case for the Australia which reflects our requirements and future needs.

I am pleased to see the very strong support that the WIA is receiving as a result of our work in relation to the reduction to 5 wpm for the Morse Code requirement for full HF band access, plus the availability of high power permits for EME activity. These of course are only two of a number of areas that are close to being resolved. Some news on LF band permits is expected soon as well as a progress report on the 80-metre DX window.

A report on the outcome of the WIA Federal Convention for 2000 will be presented to you next month.

Peter Naish, VK2BPN
WIA Federal President.

WIA moves for amateur primary status on full six metre band

continued from previous page

long distance communication in this band takes place in the low end just above 50 MHz.

3. For some years the full 50 - 54 MHz band has been available without restriction to amateurs in SA, WA, the NT and in overseas territories. It is logical to extend this allocation to the eastern states when the channel 0 allocation is withdrawn.
4. Closure of analog TV transmissions will free up 21 MHz of spectrum (45 - 52 and 56 - 70 MHz); the reallocation of 50 - 52 MHz to exclusive amateur use would not lead to any problems of spectrum scarcity for other services.
5. Some years ago there was for the reallocation of channel 0 as an ethnic narrowcasting band. If that proposal is still "live" and gets implemented, such stations could experience desensing and interference from existing Amateur operations in the six metre band, and could interfere with Amateur weak signal operations. An allocation above 56 MHz for ethnic broadcasting would be more suitable.
6. Similarly, spectrum close to 50 MHz should not be allocated to other high power services. Currently, receiver desensing and direct interference to weak signal reception is caused by a weather radar operating on 49 MHz in the Darwin area.

The WIA has requested that:

1. That when the revised Australian Spectrum Plan takes effect in 2008, the band 50 - 54 MHz be allocated to the exclusive use of the Amateur Service;
2. That the band 45 - 50 MHz not be allocated for any other kind of broadcasting or narrowcasting service; and
3. That at least several MHz below 50 MHz be kept clear of any high power services.

The full text of the proposal can be found at http://www.wia.org.au/Issues/45-52 MHz Submission.pdf

NASA spacecraft to study magnetic storms

NASA is about to launch the first spacecraft dedicated to imaging the Earth's magnetosphere — an invisible magnetic field surrounding the planet that is strongly influenced by the solar wind.

IMAGE (Imager for Magnetopause-to-Aurora Global Exploration) is the first of its kind, designed to actually "see" most of the major charged-particle systems in the space surrounding Earth.

Previous spacecraft explored the magnetosphere by detecting particles and fields they encountered as they passed through them. This technique limited their "vision" to small portions of this vast and dynamic field, which extends about 40,000 miles on Earth's day side and about 110,000 miles on Earth's night side. It would be similar to attempt understanding the nature of the world's oceans from a single buoy.

Just as taking a photograph of the night sky allows astronomers to count and study millions of stars at once, images returned by the IMAGE spacecraft will provide simultaneous measurements of the densities, energies and masses of charged particles throughout the inner magnetosphere using three-dimensional imaging techniques. "IMAGE brings to space weather studies the kind of capability that geosynchronous weather satellites have brought to surface meteorology," said Dr. Thomas Moore, IMAGE Project Scientist at NASA's Goddard Space Flight Center, Greenbelt, MD. "We may soon be treated to evening news images of plasma clouds engulfing those weather satellites."

During its two-year mission, the half-ton IMAGE spacecraft will image remote particle populations in the magnetosphere. These "photographs" will then be linked together to make movies in real time. Their rapid two-minute cadence will allow detailed study of the interaction of the solar wind with the magnetosphere and the magnetosphere's response during a magnetic storm, which typically lasts a few days.

The total cost of the IMAGE mission, including spacecraft, launch vehicle and mission operations for the first two years is about $154 million.

The Radio Plasma Imager antennas aboard IMAGE will extend 33 feet parallel to the spin axis and 820 feet in four directions perpendicular to the spin axis, making IMAGE the longest spacecraft currently on orbit.

The IMAGE mission press kit is available at: ftp://ftp.hq.nasa.gov/pub/pao/presskit/2000/image.pdf ; more information about the IMAGE mission can be found at: http://pluto.space.swri.edu/IMAGE/ and http://image.gsfc.nasa.gov

Tracking the oldies via Satellite

In Japan, nearly two million elderly Japanese suffer dementia to some degree, and the problem of them "going walkabout" is a growing one.

Now, a group of companies led by Mitsui & Co. has devised a solution - track them by satellite!

The system works a bit like the emergency positioning beacons (EPIRBS) used at sea: a small transmitter is worn by the person, or attached to his or her clothing. If they go missing, family or relatives use a portable terminal to request that the transmitter be activated, and a computerised map is displayed showing the position of the missing person.

Later this year, local governments in Tokyo and Kikuchi will test the system, which will go into service early in 2001.

(adapted from "Houston, granny is missing", Sydney Morning Herald, 31 March)

Report gives EMC Regulations thumbs up

A five year tracking study evaluating the impact of Australian Electromagnetic Compatibility (EMC) regulations was very positive, according to Australian Communications Authority (ACA) Chairman Tony Shaw.

The report showed a significant increase in industry awareness of EMC regulations since their development in 1995, and an increased acceptance of the importance for products to meet EMC standards in order to minimise disruption to communications services.

A wide range of electrical products must now carry the mark to show that they meet the standards for electromagnetic compatibility. The scheme places an emphasis on industry self-regulation, which is supported by the ACA audit program.

Supplier self-declaration and an internationally aligned approach were consistently considered the major benefits for Australian organisations. Product improvement, improved test facilities and less interference were among the other benefits identified in the report

The ACA says it will continue to monitor and review the EMC regulations in the light of developing technologies and new international standards and equipment requirements.

For further information, see ACA Media Release No. 10 - 23 March 2000 http://www.aca.gov.au/media/10-00.htm

ACA launches EMR Seminars

To address public concerns about electromagnetic radiation (EMR) issues, the Australian Communications Authority (ACA) will be expanding its compliance framework to cover additional radiocommunications equipment, ACA Executive Manager of Standards and Compliance Grant Symons has said.

Australia's public exposure limits are among the strictest in the world. The standard is based on an internationally accepted limit designed to protect biological tissue from heating and electro-stimulation effects.

"Compliance arrangements with the standard aim to ease the regulatory burden on industry, and align with the Government's policy of industry self-regulation," Mr Symons said.

"In some cases, manufacturers and importers of portable radiocommunications devices, as well as licensees of transmitter installations, will be able to self-assess compliance with the standard."

Compliance with the non-occupational limits of the standard is being progressively applied to radiocommunications transmitters in accordance with a consultation process, and the establishment of an appropriate testing infrastructure.

The issue of EMR is receiving considerable public and media interest. This interest stems partly from the increasing use of radiofrequency EMR by mobile communications, but is also fuelled by the visual impact created by some mobile telephone stations.

(from ACA Media Release No. 11 - 30 March 2000, http://www.aca.gov.au/media/2000/11-00.htm)

Introducing Amateur Radio to Net Heads

If you've ever had trouble explaining the appeal of Amateur Radio to your Internet-enabled friends, point them at an excellent article called *How Ham Radio Works*, at http://www.howstuffworks.com/ham-radio.htm .

How Stuff Works, http://www.howstuffworks.com/ is an superb web site explaining many of the mysteries of the world, and is worth a look if you have any doubt about how just about anything works. The Amateur Radio article was written by Gary Brown K4GPB, with assistance from the ARRL and several local Amateurs.

Documents updated

The Australian Communications Authority has updated two of its documents:

- *Citizens Band Radio Service class licence document*, which may be found on their web site, at http://www.aca.gov.au/publications/info/cbrcl.htm
- *Amateurs Visiting Australia*, which may be found at http://www.aca.gov.au/publications/info/visiting.htm.

The section, "Applying for a Licence" has been amended

VKs can use AX prefix for the Games

The WIA Federal President, Peter Naish VK2BPN, has received confirmation from the Australian Communications Authority that all Australian radio amateurs may use the optional "AX" callsign prefix to commemorate the Sydney Olympic and Paralympic Games. The period during which this may be used is 15 June 2000 to 2 November 2000 inclusive.

LATE NEWS

WIA adopts new "no code" policy

The Wireless Institute of Australia at its 64th annual Federal Convention in Melbourne April 29-30 has adopted a new policy that it support an end to mandatory Morse code amateur licence testing.

In February this year the WIA adopted an "interim" policy to seek 5wpm for full HF band access.

The Australian Communications Authority in response to a WIA submission has since accepted "in principle" that 5wpm be introduced, most likely in the new few months.

In the latest development, the WIA Federal Council in considering the matter further, resolved to support the removal of Morse code testing from the ITU Radio Regulation s25.5.

The WIA will take its new policy to the IARU Region III conference in Darwin in August, when the issue of mandatory Morse code amateur licence tests will be reviewed.

The earliest opportunity to make a change to ITU RR s25.5 will be the World Radio Conference 2003.

Morse code watch, WIA Victoria, www.tbsa.com.au/~wiavic

Australian Federation Satellite won't be active on 70cm

After a lapse of more than 30 years, Australia will re-enter the space race when the Cooperative Research Centre for Satellite Systems (CRCSS) launches FedSat in late 2001.

FedSat will be launched from the island of Tanegashima, about 1000 km south west of Tokyo, by the Japanese National Space Development Agency (NASDA)

The satellite will gather data from the outer atmosphere and measure changes to the Earth's magnetic field. Project manager Jeff Kingwell says, "The interaction operation of those payloads between the Sun and the Earth will give early warnings of disruptions to communication systems. We will gather a lot more knowledge to hopefully intervene in future disruptions."

As well as the scientific and environmental payloads, the satellite will carry a CD-ROM, "time capsule", onto which will be recorded samples of Australian life in the early 21st century. For the princely sum of $3.95 per minute, members of the public can also add their own messages for inclusion on the satellite's CD - simply ring 1902 974 001 and start talking. The money raised will fund further Australian space research.

The satellite will broadcast the CD-ROM content on its various beacons. It was this function that caused a bit of a stir in Amateur circles, when Jeff Kingwell of CRCSS was quoted in a ZDNet article that "ham radio" equipment would be required to receive the signals.

This gave rise to some concern among Radio Amateurs, especially those who remembered the "Beat" controversy last year, when Swiss match maker Swatch attempted to promote its .Beat brand using a Sputnik replica satellite purloined from French and Russian Amateurs. Swatch was subjected to a massive international protest from Amateurs the world over, and eventually abandoned the attempt.

A phone call and a few emails resolved the FedSat confusion: by "ham radio", Jeff had meant to indicate that the satellite signals could not be received on normal domestic receivers. In fact, the nearest FedSat will get to Amateur frequencies is with its UHF beacon on 400.4 MHz.

Peter Ellis VK1KEP and Richard Murnane VK2SKY suggested that "scanner" might be a more appropriate term to use in media releases.

CRCSS is also working with the Australian Space Research Institute on another smaller, more complex satellite and also operating joint missions with overseas space programs. Mr. Kingwell says that CRCSS "would be happy to discuss the FedSat mission with the Wireless Institute of Australia, particularly with a view to ways in which the amateur radio community could track or collect data from the satellite, or participate in educational projects."

Related links:

- CRCSS home page: http://www.crcss.csiro.au/
- SPIN - CRCSS Space Industry News: http://www.crcss.csiro.au/spin/spinmain.html
- Australian Space Research Institute: http://www.asri.org.au/research/smallsound/Trial0699/SiZu0699FSMR.html
- The ZDNet article that caused the concern: http://www.zdnet.com.au/zdnn/stories/zdnn_display/au0001442.html
- Swatch and the Beatnik protest: http://www.epistolary.org/rob/swatch-protest/index.shtml

Try This

Testing Toroidal Baluns

Graham Thornton VK3IY

All we need for these tests is a rig with a SWR meter and a dummy load. The techniques given can be used to home brew your own balun on a suck-it-and-see basis.

Firstly, we should check for sufficient primary inductance. Crank up the rig, with the dummy load connected, on the lowest frequency to be used. The SWR should be 1.0. Connect one winding of the balun across the dummy load. There should be no perceptible increase in the SWR – otherwise the balun requires more turns. (If the SWR goes off scale, the transformer has shorted turns.)

Now let us check for leakage reactance. Connect the primary of the balun to the rig and the secondary to the dummy load. The SWR should be close to 1.0 over the whole range of frequencies to be used. If it increases noticeably at the higher frequencies, leakage reactance is excessive. (Its value may be measured by adjusting a capacitor in series with the primary to bring the SWR back to 1.0. The equivalent primary leakage reactance is numerically equal to that of the capacitance needed.)

If leakage reactance is apparent, the windings must be in more intimate contact. This usually requires the use of enameled wire, with the primary and secondary wires twisted together in bifilar mode.

In the absence of any obvious leakage reactance, the efficiency of the transformer may be taken to be the reciprocal of the SWR with a dummy load. Thus, if the SWR is less than 1.1, the efficiency will be at least 0.9 or 90%, giving an insertion loss of no more than 0.4db. On most rigs, it will not be possible to measure SWR less than 1.1. If the SWR is 1.5, the efficiency will be 0.67 (67%), with an insertion loss of 1.8db. Thus, if we have only a bearly detectable SWR, we have no worries about efficiency.

If, despite the above tests, the transformer core gets hotter than merely warm under full load, we have no choice but to increase the size of the core.

ar

5 WPM Morse Q & A

What does the ACA "in principle" decision on Morse code licence testing mean?

By Jim Linton VK3PC

The following question and answer series reflect the anticipated change in response to the WIA's submission that amateur licence Morse code tests for full HF band access be 5wpm.

Q: I am an Intermediate licensee. Will I be able to use all of the Unrestricted licence HF power limits, modes and bands?

A: Yes. The change to the Licence Condition Determination will afford all of those operating conditions.

Q: As a Novice licensee I want to continue my program of upgrading and think I'm able to pass Morse code at 10wpm. Can I still sit the full-call code exams?

A: Yes. The Unrestricted (AOCP) licence will continue to be available. This arrangement will be reviewed following any relevant changes made at the WRC in 2002/3.

Q: I have been inactive for a few years but have held both Novice and Limited callsigns. How do the changes affect me?

A: You are already qualified for the issue of an Intermediate licence. You will of course need to apply for its issue.

Q: As an active member of my local radio club and an Intermediate licensee will I be able to fully operate the club's station which has an Unrestricted licence?

A: Yes. Intermediate licensees with a Jxx or Kxx callsign suffix can operate club stations on all HF bands under the conditions of their licence, which will be the same as the Unrestricted licence.

Q: I hold an Intermediate callsign and want to change it. Can I?

A: It is not necessary to change your callsign. Callsigns associated with Intermediate licences are not changing. However you will still need the 10wpm qualification if you wish to qualify for an Unrestricted licence with its associated callsign.

Q: If both the Unrestricted and Intermediate classes continue, it seems there will not be many new full calls issued. Why didn't the ACA just abolish the Intermediate licence and change the Unrestricted qualification to 5 wpm?

A: The ACA did not want to do this because it believes it would require it negotiate new reciprocal licence agreements with other countries. Most other countries haven't changed to the 5 wpm qualification yet. The ACA is of the belief that if the Unrestricted qualification was changed to 5 wpm, Australian full calls might have problems getting full reciprocal licences in other countries which still require 10 wpm or its equivalent.

Q: With an overseas trip planned I wish to operate in another country. Will my Intermediate licence be recognised?

A: The Intermediate licence will still be fully recognised in all reciprocal licensing agreements because the qualifications for it will remain the same. However, the level of spectrum access granted will probably vary from country to country depending on whether they have changed to the new 5wpm arrangements.

Q: A DX friend is qualified by passing the full grade theory plus 5wpm Morse in his country and his licence is similar to that of the new VK Intermediate licence. Can he obtain a visitors licence for use in Australia?

A: S/he can get a grade of licence that accords with a reciprocal licence agreement (if any) established between her/his country and Australia, or a grade of licence that corresponds with qualifications recognised by the ACA. S/he would need to provide ACA with evidence of the qualifications. Full details are published in the ACA information paper, "Amateurs Visiting Australia".

Q: I am Limited or Novice licence holder. What do the changes mean for me?

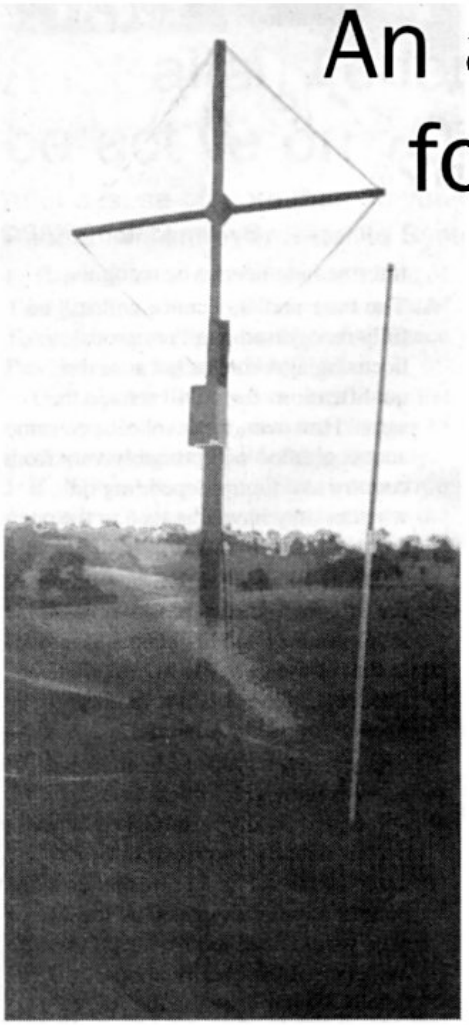
A: The change only affects the Intermediate licence. However it is anticipated it will encourage Limiteds and Novices to upgrade.

ar

An active frame antenna for 160 metres reception

by Keith Gooley VK5OQ

The frame antenna has been around for a long time and was popular in the early days of wireless reception. I am interested in receiving the VK5WI Sunday morning broadcast originating on 160 m with better signals than I could on the Vee beam. This antenna in combination with the 160 m bandpass filter described in an earlier edition of AR and a modified AM broadcast radio does the job.



The frame antenna is basically a large coil of a few turns of wire resonated at the required frequency by a variable capacitor. Tapping into the resulting tuned circuit with, for example, a one turn link coil, inevitably lowers the Q and doing so in an unbalanced fashion makes the arrangement susceptible to pick-up of noise and interference from electric fields in the vicinity. If balance is maintained, the antenna will only respond to magnetic fields. Not that noise and interference can't be transmitted by magnetic fields, it can, but if we can reduce the reception of the electric field components we are better off.

To achieve both these aims, that of high Q and good balance, a push-pull, high input impedance buffer is used between the tuned circuit and the coax line to the receiver.

Description.

My antenna consists of a square coil of 5 turns about 850 mm on the side or 1200 mm diagonal. The type of wire used is not critical, enamelled or PVC insulated, thick or thin. The two ends are connected to the two stators of a dual gang capacitor. The old air-spaced type would be ideal if you have one in the junkbox but the miniature plastic insulated type would be OK as long as the two halves have the same capacitance to maintain the balance. The two FETs are in a common-source configuration with a wideband transformer coupling the drain circuit to the coax. Power for the amplifier, 12 volts at 4 mA is fed up the coax, eliminating the need for a separate power line.

There are a couple of components put in as a result of experiments in setting up the antenna. These are R8 and R9. I found the coil Q a bit high and the adjustment of the tuning capacitor a bit critical and so R8 was included to lower the Q somewhat. R9 (56 ohms) provides a good 50 ohm source impedance for the filter which is at the other end of the coax. The receiver was prone to instability without it.

Construction.

Make a wooden cross from two pieces 1200 mm long fixed together with a 75 mm square gusset plate. I used garden stakes as they are cheap and up in the air will last a long time. The gusset plate is galvanised iron. Drill five holes in each end of the cross arms to take the wire plus an extra hole where the ends of the coil will be to terminate the end of the last turn. Wind the coil keeping the wire reasonably taut so that it doesn't flap around.

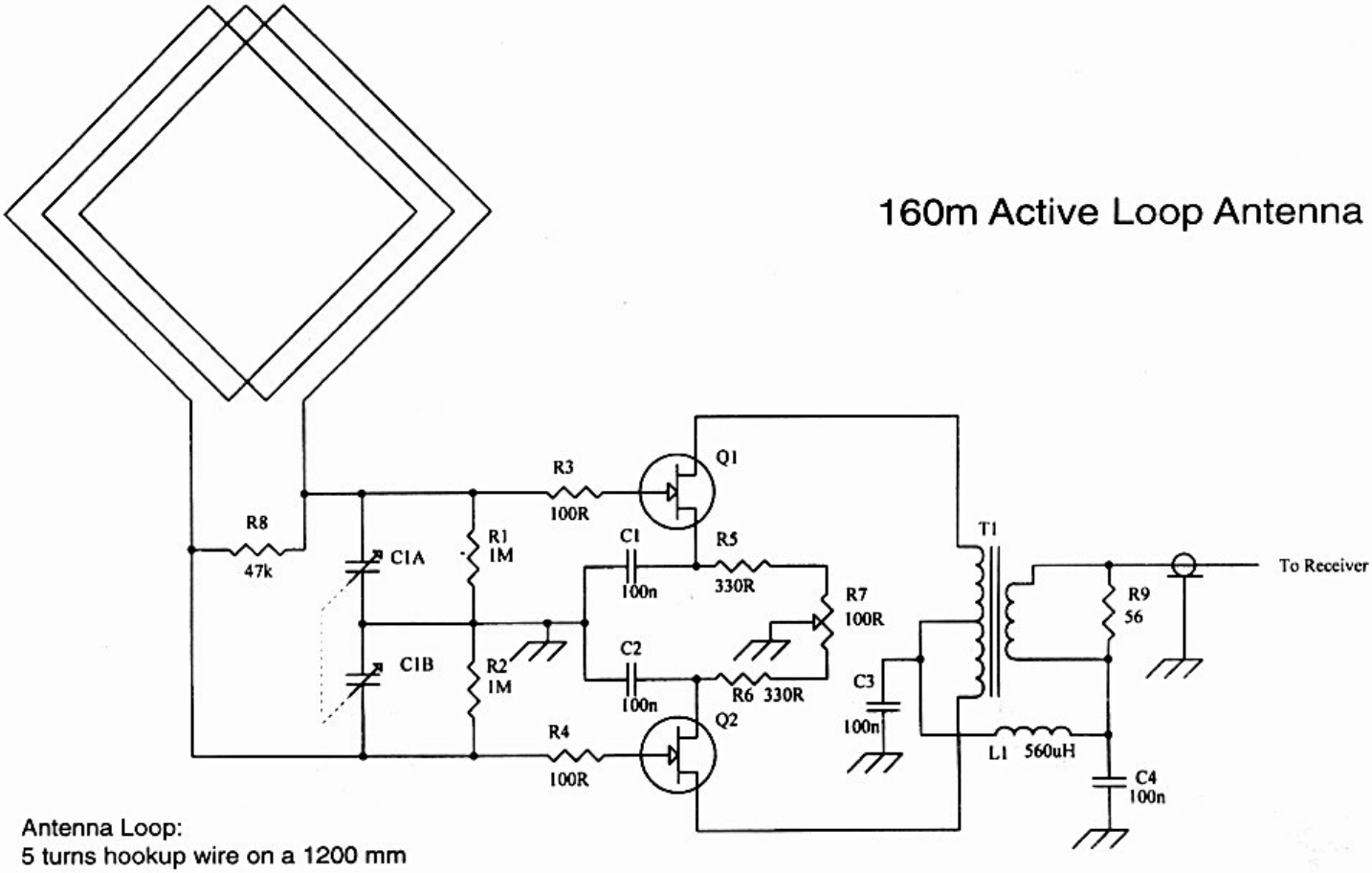
The buffer can be built up on any type of board; dead bug construction, Drew Diamond's "paddy board", matrix board or veroboard could be used. Almost any RF FET can be used. Possible types are listed on the circuit. If at all possible, select devices with approximately the same IDSS for good balance as this characteristic of most FETs varies over a wide range. (IDSS is the drain current with zero volts on the gate; ie the gate connected to the source).

The wide band transformer was wound on a 14 mm diameter potcore which had an Al value (inductance of one turn) of about 1.5 µH. An FT50-43 toroid could be used but the primary turns should be increased to 18+18 and the secondary to 5 turns. A wide variety of cores could be used but the main criterion is that the total primary inductance (drain to drain) should be between 500 µH and 5 mH and keeping the same turns ratio. Bifilar wind the primary, again for good balance.

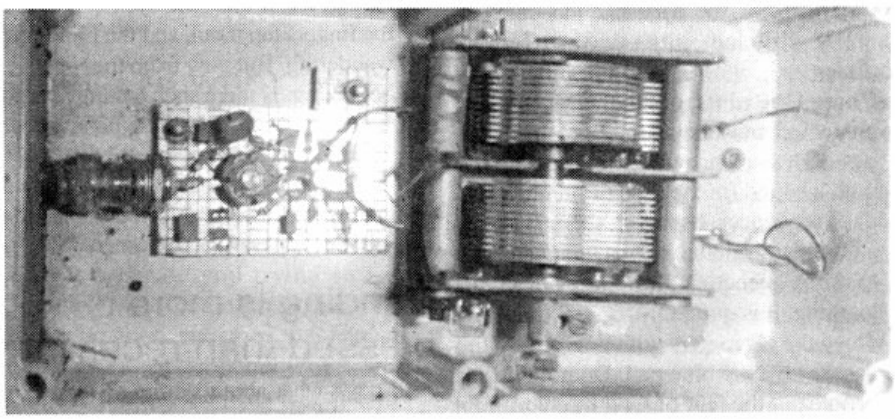
I put in the 560 µH choke in the DC supply as a precaution against interference picked-up on the coax. It could be left out along with one of the 100 nF bypasses but I chose to have it in, just in case. Any value from 10 µH (Xl=100 ohms) to 1 mH would do.

The tuning gang and the buffer will have to be housed in a weather proof enclosure if the antenna is to be used outside but there is no reason for it not to work inside a house of conventional brick veneer construction. Clearly, the magnetic shielding of a galvanised iron shed will require the antenna to be outside to work well.

160m Active Loop Antenna



Antenna Loop:
5 turns hookup wire on a 1200 mm diagonal frame
Q1, Q2 : MPF102, 2N5484, 2N5485, J310, U310
T1: 18 + 18 turns primary, 5 turns secondary on FT50-43 toroid
C1A & C1B: 300 to 400 pF per section tuning gang



Adjustment and Performance.

Before connecting the loop and tuning capacitor to the buffer, apply power to the buffer and check that there is about 0.7 volts on each FET source. Join the two inputs together and apply a signal from an antenna, transmitter on very low power or signal generator and adjust the trimpot in the source circuit for a null at the output. I measured a rejection of 58 dB with well matched FETs for common mode input signals. Applying a signal to one gate results in a voltage gain of 1/2 (-6 dB) to the 50 ohm output. This may seem a bit of a dead loss with a gain of only a half but the high Q of the loop antenna steps the voltage up considerably and the active antenna is quite sensitive.

The buffer output is fed though the bandpass filter described in an earlier AR and into a modified really cheap transistor radio. One oscillator-mixer transistor, one in the IF and 3 in the audio. More of that in a future article perhaps.

I live 30 km as the crow flies (Crows fly?) from VK5WI and it booms in with quite good signal to noise ratio, though not as good as I would like at about 20 dB S+N/N. But it was well worth the experiment in building an antenna as venerable as the old Frame. (This was measured while VK5WI was still at Thebarton. The need for such an elaborate receive antenna for VK5 WI has been drastically reduced by the relocation to the Water Tower at Elizabeth.)

ar

So you have seriously decided to learn CW ? I'm really pleased, because I personally consider telegraphy to be a fascinating operating mode.

Conquer the BW* and get your CW!

(*The **B**ludger **W**ithin)

Part II

Translated, with comments relating to Australian circumstances, by Mike Krochmal, VK3KRO from an article by Dieter Engels, DJ6TE in CQDL 8/99 (pp. 659 & 660) and 9/99 (pp. 743 & 744)

This is where you find out what awaits you during the learning of Morse code characters. Let me state right at the outset : no matter which method you have chosen to learn CW, no matter how musical you are "not" - the one and only thing you will need is endurance. Perhaps a few more comments in this regard.

Two-phase CW

The learning of the Morse code can be basically divided into two different processes :

- **Phase One :** First of all, the Morse characters must be learned, ie. their dot-dash sequence must be associated with a sound (in the case of pure dot or dash sequences, however, there is no sound), and a letter is then connected to this sequence. In this phase of learning, it is quite OK for you to jot down the characters with dots and dashes on a scribble pad. Do not let people put the fear of God into you, this will not do you any harm. In this phase, you will hear a character, you will convert this character mentally into a letter and you will write down the character. Each of these three processes requires time. The time required for thinking, however, will continue to shorten, and the writing process will accelerate.
- **Phase Two :** When all Morse characters are being recognised - regardless of how much time this takes - the second learning phase begins. I call this "getting up to speed". In this phase the only important factor is to banish the learned knowledge into the subconscious. My reason for making that statement is this : hearing, recognising and writing must all occur at the same time if you are really to reach 12 wpm. But this will only work if the recognition process disappears into the subconscious and if your hand automatically (conditioned reflex) writes the recognised letter. The significance of this is : your hand is writing a letter, your subconscious is recognising another one, and your ears are already hearing a new one, all simultaneously. People who have learned "10 fingers blind", touch typing, know this : the eyes see the text, the fingers tap it out, and the mind goes wandering. But now from the beginning. Is there such a thing as a gift for Morse code ? Yes, I do believe there is - but there is surely nobody who could not hear at least 20 wpm. Only at speeds in excess of this does musical giftedness play a (small) role.

Sending is more blessed than receiving

And now, what about sending Morse code characters ? There is not much to explain, in words - ideally, a skilled OM should be available as teacher. But essentially, the following applies :

- Don't start sending too early. This process may accelerate the learning of the characters, but beginners usually get the pauses between words and characters totally wrong. So only start sending when you can already receive at the highest speed.
- As a matter of principle, start with a manual key and only change to an electronic key later. Reason : the Morse characters must first - as a reflex action - be converted into a body movement. This body movement (wrist) is then "simply" re-learnt as a finger movement when changing over to the E-key (electronic keyer).
- Sending with an E-key requires at least 10 to 20 hours of additional practice time. It is not enough to be able to send flawlessly at a particular speed - you should be able to master every speed between 12 and 20 wpm.
- The examiners (radio amateurs, too, and usually nice ones) have traditionally always been very tolerant when it comes to sending. So : don't panic !
- To send correctly is much more difficult than receiving - with a manual key, 18 to 20 wpm is the limit. So it is better to send slowly, but cleanly. Don't allow the "shakes" to force you into a higher speed - during the exam, there will be some quite different parts of you that will be shaking - and that will result in some ugly intermodulation interference !

Correct adjustment

Sending is only possible with the correct adjustment - of both the key and the body. Set the key pressure to about 100 gram. Don't make the stroke too short : the gap should be about the same as the thickness of two to three postcards. Grip the head of the key in such a way that the key is lifted back upwards by the fingers. The Morse characters are stored in the wrist - during slow sending, the wrist literally pounds the table ! Place both of your arms, relaxed, on the table, at an angle of about 45 degrees. This is how you send CW. Are you a Southpaw (left-handed) ? Fine, then try to send with your right hand. Write with the left - send with the right : this is the stuff that contest winners are made of. Start with the dot-dash sequences. Really ! Practise

these for so long (and again and again) until you can send such sequences without stumbling, at various speeds, for minutes at a time. Only then go on to practise the simple characters. Remember : no pauses that are too small. And don't forget to practise the error character, too - you'll probably have need for it in the exam.

CW without whistling in the ears

Headphones. Do you need a pair ? If so, then don't use the type that you have to plug into your ear. They might be OK for Pop music - but not for CW characters. But also don't use "sealed-off cans" - they'll be full of water in short order. A very ordinary set of headphones is ideal. Don't place them directly on your ears, but rather on your cheekbones. There, they won't press until they hurt, and you will surely be able to avoid tinnitus (ringing in the ears). Oh, yes, before I forget : it is a really good idea to change the pitch of your sound source every now and again. This will allow you to avoid a situation where, after a while, you are unable to distinguish trains of dits. From the start, set your receive for a character speed of 18 wpm. The overall speed can then be adjusted to approximately 6 wpm just by lengthening the spaces between characters, which you can then reduce by and by to the normal value as you proceed through the course. The advantage of this method : the characters have the right "sound" to them right from the start - and you leave yourself a bit more time to think.

Block letters are for masochists

Since we are on the topic of equipment : what to write *with*, and what to write *on* ? The answer : propelling pencil (thin HB lead) on squared paper. In the beginning, you will be unable to recognise the spaces between groups (partly because such spacing seem to last forever), but later you will find that they are easy to spot and should appear on the paper, too. By the way: spaces do not count as errors. How to write? Write in your favourite script, presumably ordinary handwriting, because by nature this will be your fastest script. Beware block letters or All Capitals : to write a capital E with a total of 4 strokes at a speed of 18 wpm borders on masochism. But try to keep it legible. In particular, watch e and l, h and k, r and v, as these often look quite similar. Had enough now ? I don't blame you - but will you forgive me if I still tell you a bit about the difficulties which await you in the learning of the Morse code ? You just need patience - and a strong hand with your "BW". Everything else will just fall into place by itself. Why don't you spend a bit of time thinking about what nice callsign you will want ?

Problems ? What problems ?

Be brave in the face of gaps ! In the learning phase, it's quite OK to think for a while about a particular character and miss three or four others in the process. It matters not : wait for the end of the group, and then just start anew at the beginning of the next group. And when you've finished, don't compare the entire text. That just wastes time, and gains you nothing - apart from the feeling of being a failure. Just compare the last couple of groups, that's plenty ! You will know where and when you are making mistakes, anyway, even as you are writing it all down. So, for example, you will confuse letters with similar-sounding characters : s with h, b with 6, etc. That is quite normal. You will confuse letters with their mirror images : a with n, and q with y is also popular. So what ? That will settle down, with time. Numbers will initially be hell for you - but later on, they are the easiest things to receive.

Target : 18 wpm

In the second phase, the objective is speed. Try to get to 18 wpm as quickly as possible - you should increase your current speed by 2 wpm as soon as you can get more than 60 % or 70 % of the text correct. Don't argue - just do it ! Or are you trying to learn calligraphy ? But getting less than 30 % correct is no good, either - if that happens, cut back the speed temporarily by 1 wpm. You can just judge the percentages by gut feel. You do have gut feel, don't you ?

Preferably, don't keep going for more than a half hour at a time (with really short rest stops). After 10 minutes, things are going great guns, and then the effectiveness is already all downhill from there. But it's OK to receive for a half hour at a time, five times a day - the more often, the better. If possible, do two receive sessions a day, but at least one. And be warned : to learn only one hour of CW per week means that in ten years' time, you will still not be ready to register for the exam. If possible, don't receive with the headphones. Play some quiet music in the background; especially music that you are familiar with. Doing this will accelerate the shift of the Morse code characters into the subconscious - that was our objective, remember ? Allow yourself "rewards" when things have gone exceptionally well. And once again : make sure that you get to 18 wpm as quickly as possible. (If nothing else, you will hear three times as many characters in a given time at that speed as at 6 wpm, so the learning effect will triple !)

Plain text - a hurdle

Amateur radio texts, groups, plain text ? Predominantly letter-groups of five - because these contain all the letters. Every now and then, when you feel that you can handle defeat - plain text. But have a listen to number-groups and amateur text, too. And don't totally forget the punctuation characters; you don't have to practise ar and ka, they are not counted as errors. (ka is the operating character that will cause you to shake, and the sweat to run down your back. ar is the character which causes you to let the pencil slip from your stiff fingers, and your lungs to once again fill with air at long last).

There are two particular hurdles that you will ram your head against. Be clever - run around them ! Do you still remember : hearing - thinking - writing ? That works up to 8 or 10 wpm - depending on how fast you can write. At 12 wpm at the latest, you will start to have problems : the (still too long !) space is no longer long enough for thinking and writing. Now the trick is to hear and write at the same time, or to hear and think at the same time. Not to worry : the problem will go away of its own accord. And then, 2 or 4 wpm higher, there is yet another similar hurdle. Because now you will really have to do everything at the same time, because the spaces have become nearly normal. To deal with these two hurdles is essential, and the only thing that will help here, purely and simply, is endurance. If you manage these hurdles, then "Class 1" is as good as yours. In that case, you could soon even receive 20 or 22 wpm. Talent and a musical sense are by far not the issue at 18 wpm. Please do believe me at last !

Now let's get up to speed

If you have arrived at 18 wpm, then slowly start to concentrate on avoiding errors. Don't think about missing letters any more, but just leave them out. In the case of unfavourable combinations, such as the group "essen", you will fabricate real "error groups". Have a good laugh. In the meantime, the groups of five should be

continued next page

continued from previous page

neatly arranged, so that missing characters are obvious at a glance. Even now, you should restrict corrections to the last ten characters, because you can work on the assumption that a letter which has been written down is probably correct. (Unfortunately this only works to some extent for s and h, hi !). On the other hand, a healthy dose of skepticism is in order if, for instance, you have not heard a y for hours. Now and again you should go back to 12 wpm and count the errors properly. Don't register for the exam until you can receive 12 wpm for 3 minutes in the "normal" manner without errors. Corrections after writing are permitted !

You should also set 12 wpm without the extended spaces (ie. slow characters), and write to keep up. Because there have been times when tests were carried out using such "rotten" Morse characters. These slow characters are initially really difficult to receive, but after some acoustic familiarisation they should not present a problem. That is because after your training at 18 wpm, you are no longer relying on the long spaces. And don't worry too much about the punctuation characters, because you can often add them afterwards "by instinct". But remember the slash which can occur in callsigns. And the equal sign or double dash bt is also relatively important, but is fairly easy to receive. You will be able to receive plain text without errors only if you are able to retain a few letters in your head and write them down later. You could try some groups of five with mixed numbers and letters. Because that's what callsigns look like. But the result will be that you not only confuse s with h, but also h with 5, v with 4, etc. But even this will solve itself with time !

No experiments

Please save yourself such extravagances as "the receiving of words in the mind" and the "listening to the short wave bands". You are, after all, not practising for real life, but for the exam. That's the reality, isn't it ? In the case of "hearing in the head", there is a whole other mechanism at play - you will have no use for this in the exam. (And if, after the exam, you really do continue with CW, then the "hearing in the head" will come of its own accord). By the way : the "hearing in the head" is a legitimate way to break the ice in a Morse code course - but it's no more than that ! Yes, and why not listen to the short wave bands ? The answer is simple : wasted time. One hour of effort for perhaps 5 minutes of usable live Morse characters.

Well, my friend, that's about the end of my tips. Perhaps I was able to reply to one or two questions - before they were even asked. I hope that you will learn the Morse code without major difficulties.

Translator's comments by Mike, VK3KRO :

The above article has been translated verbatim from the German original text, so as not to destroy the meaning. Some additional comments follow.

- We are very lucky here in Australia, even under current conditions (though I know that there will be those who beg to differ) : to obtain our full licence (AOCP) we need only demonstrate proficiency at 10 wpm, in contrast with many other countries which demand 12 wpm and even higher for various licence grades. However, for those of us who are suckers for punishment, I believe that certification at higher speeds is available on demand in Australia.
- Note on Pocket Tweeters : 400 DM to 500 DM for the Swiss unit is near enough to A$ 400 to A$ 500, which seems a lot. The MFJ-418 unit mentioned in the article is available locally from Strictly Ham (and possibly others) for about A$ 180.
- I'm sure that I have seen, published somewhere in a magazine, a project for home-brewing one of these Morse tutors, but can't locate it. Perhaps some kind reader can write to the Editor and let everybody know.
- There is an article (title : "Using PIC Microcontrollers in Amateur Radio Projects") showing how to build a simple Morse code practice oscillator using a PIC chip in QST for October 1998, on pages 34 to 40. I don't want to be unkind, but it beats me how (except for learning about PICs) this is better than a piezo buzzer with a battery for a total cost of a couple of bucks !
- Some of the local radio clubs do run CW lessons, but when I checked "Club Corner" in AR and the other magazine, there were no ads to be seen. In my humble opinion, clubs are their own worst enemies by not using these media to their best advantage.
- Good old Len VK3COD has been doing an amazing job for nearly 20 years, turning up on air night after night, running code and patiently listening to callbacks. Well done, Len ! In case you don't know where to find him : 28.340 MHz and 147.425 MHz, every week night at 1030 UTC. There's also the VK3RCW continuous Morse code beacon on 145.650 MHz, which transmits 5 wpm and 10 wpm code. And there are slow Morse groups, especially on 80 metres.
- Readers may like to check out the ham links page on my web site : the URL is www.autoscan.com.au/~autoscan/ham.html
- Five particularly wonderful programs are :

  "The Mill", by Jim Farrior, W4FOK (see ww.morsum.dem,on.co.uk/learners.html)

  "Supermorse" by Lee Murrah, WD5CID

  "Numorse" by A. Lacy, G4AUD

  "MRX" by John Samin, VK1EME (Check out www.mrx.com.au)

  "Morsecat" by Gerald DK5CI (freeware !)

  I'm sure there are lots of others. Try a search engine, using the search string : + "Morse code" + "training", or something along those lines.
- Great book : "The Art and Skill of Radio-Telegraphy", by William G. Pierpont, N0HFF, available at : www.joates.demon.co.uk/megs/N0HFF/index.htm
- Various links at Morsum Magnificat (last updated 19 August 1998, the magazine, once a beacon of the CW world, is now possibly defunct): www.morsum.dem,on.co.uk/learners.html

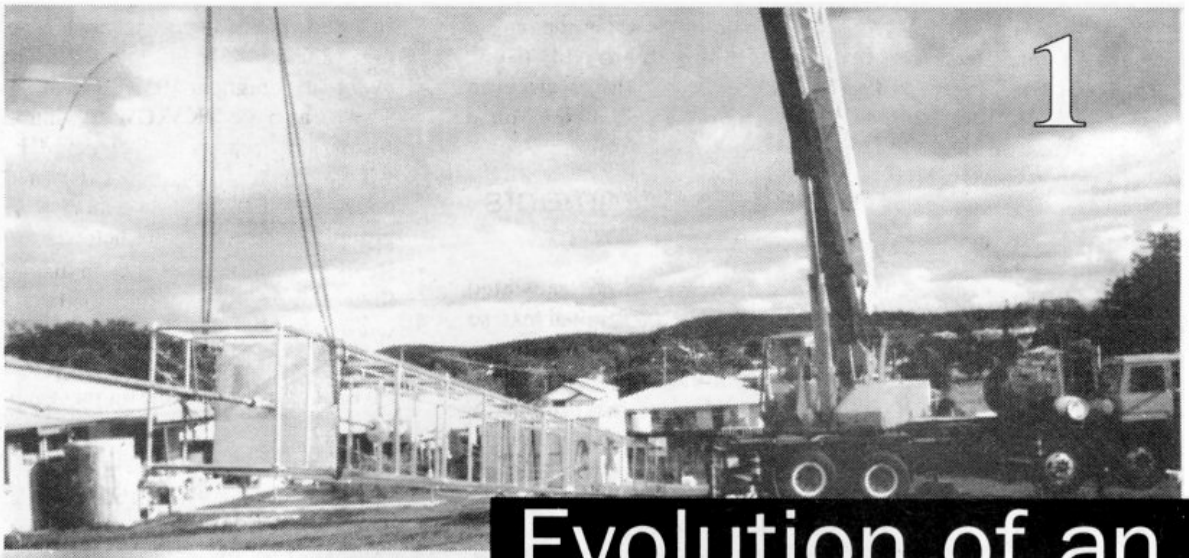
  (Has a link to "The Mill", and to a bunch of other Morse learning programs)
- For suckers for punishment, check out my personal comments on Morse code on my web site: www.autoscan.com.au/~autoscan/ham.html

  The paragraph about the code is headed "The Dreaded Diddli-Dahs"
- For those who really want to get into this, there is a web site that automatically translates text to Morse and Morse to text : http://www.soton.ac.uk/~scp93ch/refer/morseform.html
- Version 8.0 of Ralph Taggart WB8DQT's program is now out : http://taggart.glg.msu.edu/wb8dqt/cwpage.htm

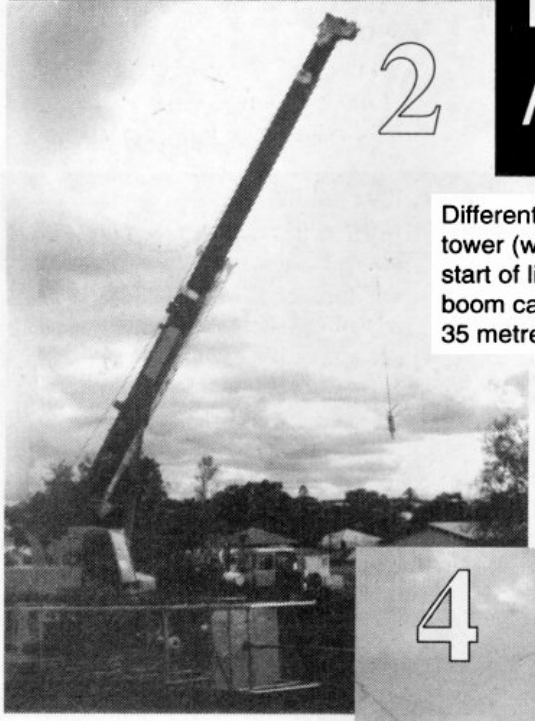
ar

Evolution of an Antenna Farm

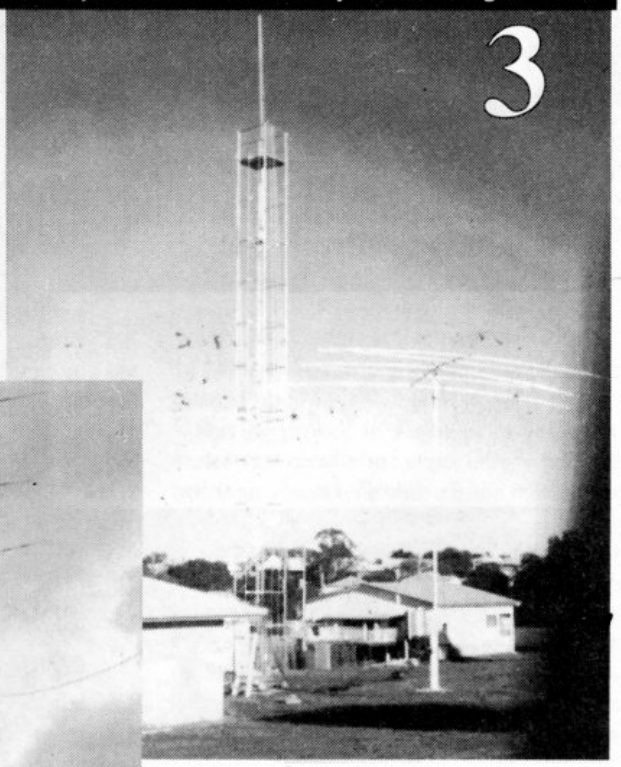
by Bernie Witjes VK4BTF, 9 Hanley Lane, Morgan 4065



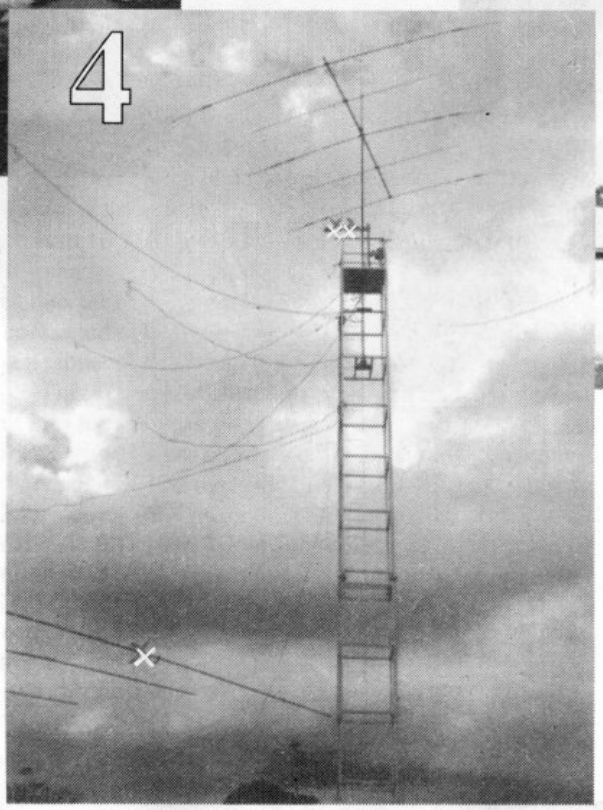
News tower on the ground, about to be hoisted into position by a hired crane



Different angle on the tower (weight 1800kg) at start of lift. The crane boom can lift to a height of 35 metres



Tower in position to receive to 20 metre boom. Height to the top is 26 metres. Eventually a lift will be installed to facilitate maintenance at the top

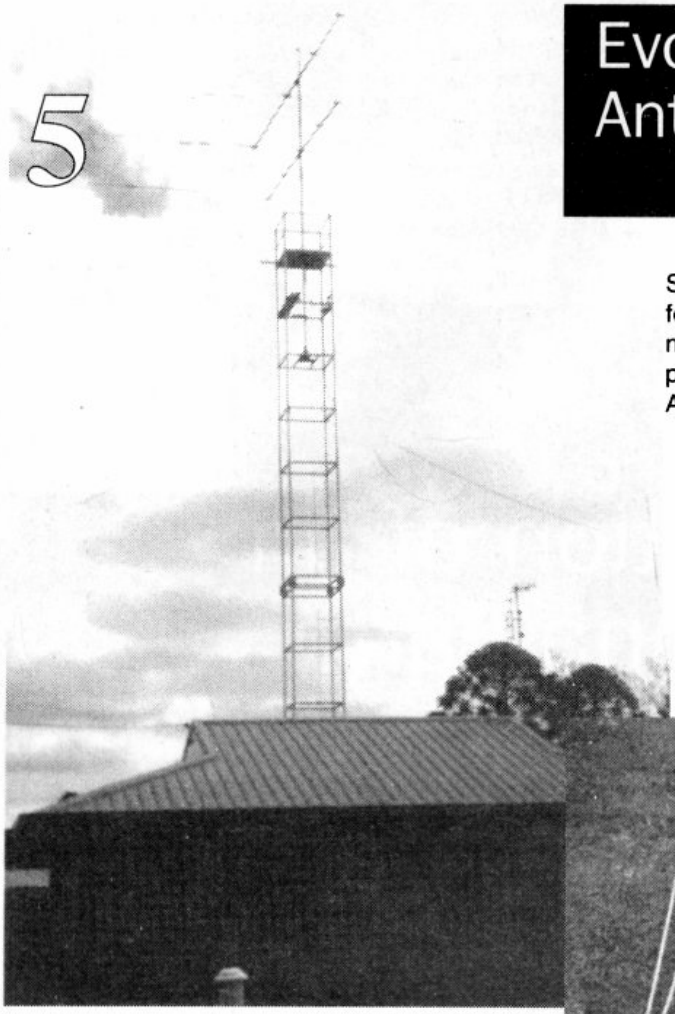


One beam (marked X) in tune up position near ground. Another beam is in position at top. The cross arm (marked XX) near top is a small crane for hoisting beams in position. Sundry wire dipoles have been accentuated in the photograph. These will be discarded as beams are installed for all bands.

continued next page

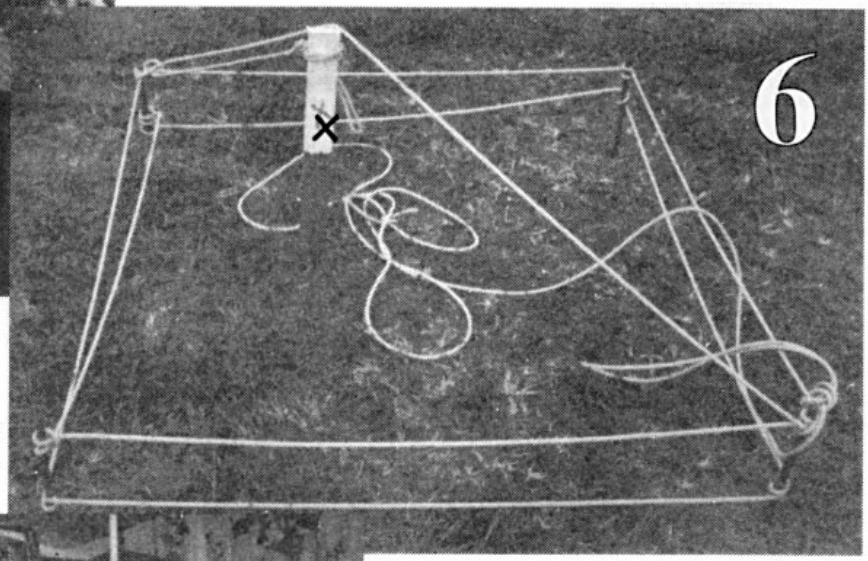
Evolution of an Antenna Farm

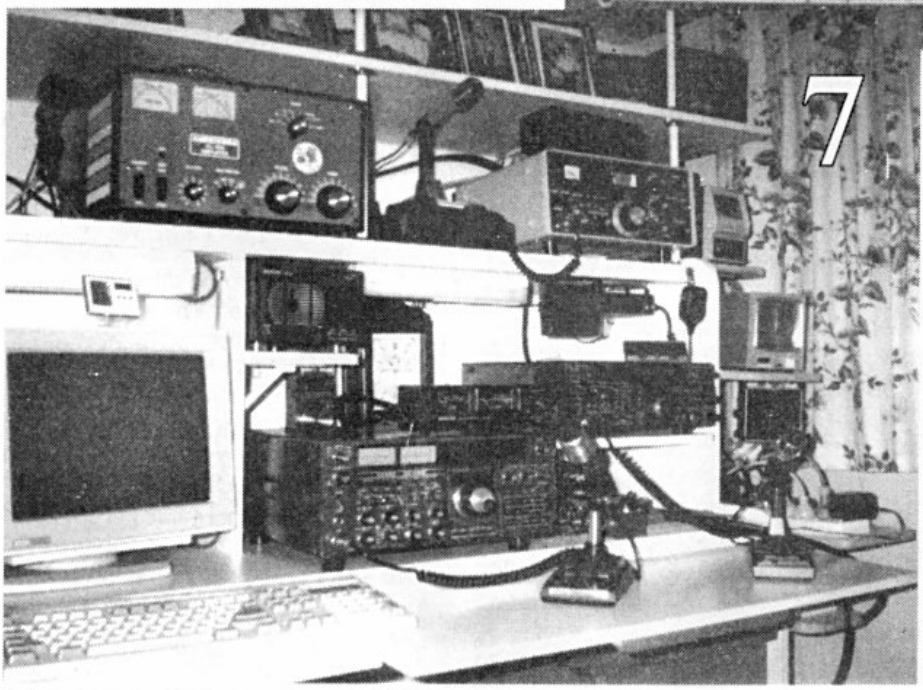
continued from previous page



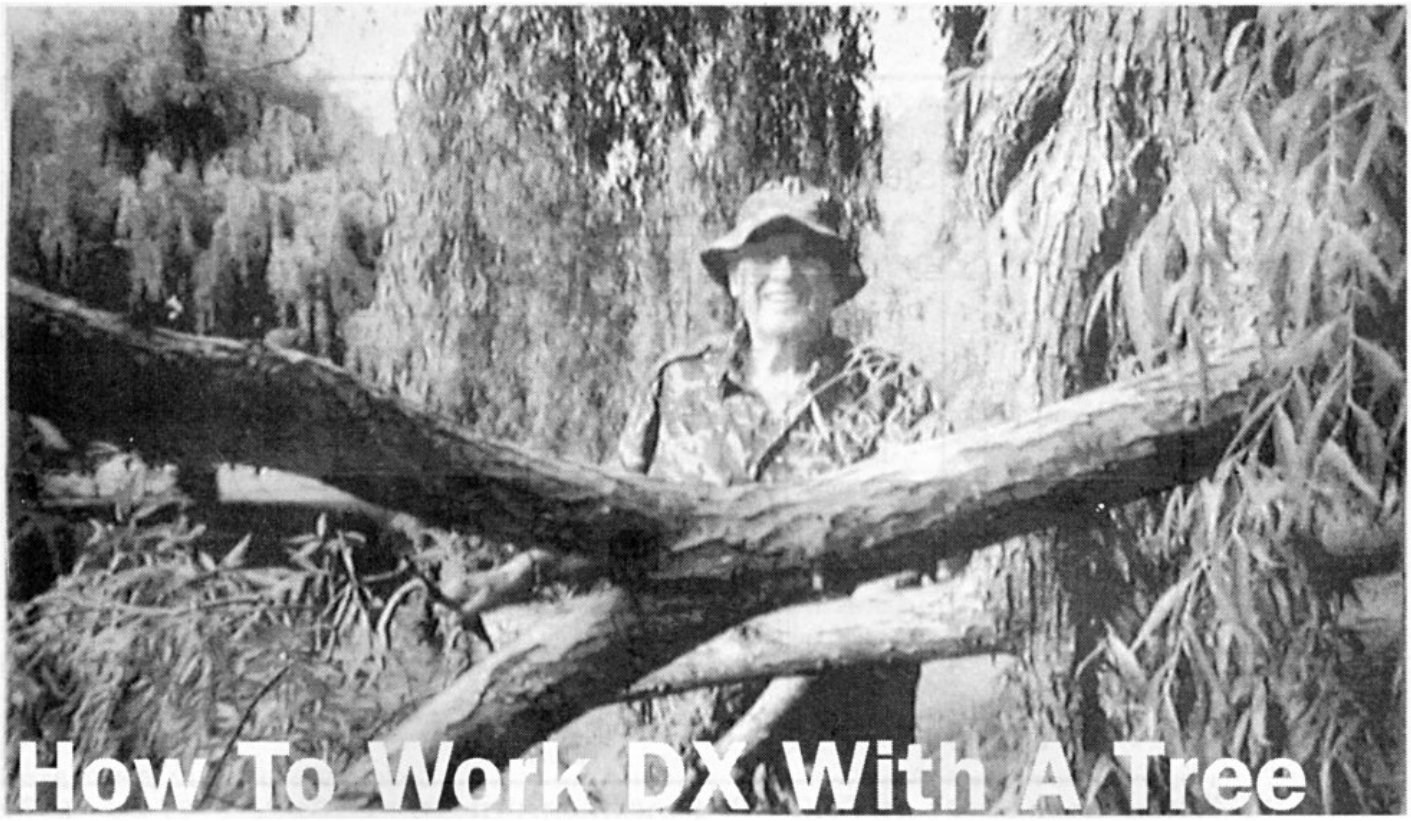
Stacked tri-banders installed for 10, 15 and 20 metres. A 40 metre 3 element beam is planned on a separate tower. All towers are home brew.

Position by satellite





The shack. A TS850S into AL80B linear. Also a FT2200 on 2m. FT one and FT101E are in the picture. The shack and shelving is home brew.



How To Work DX With A Tree

Ernest H Sloman VK2BUE ex ZB1AI

I am working DX on a gum tree. Arthur Andrews VK2AAE aroused my interest with his article in September 1998 Radio and Communications on Arboreal Antennas. There are a lot of interesting facts in his two page article. The most informative being the sketch of the cross section of a tree trunk showing the various areas through to the heart of it, at the centre.

After reading his article several times I started thinking. I've got to find a tree that resonates to the twenty metre band. Twenty metres is a well used band and at about 1700 local time on 14.017 MHz F8AH is calling CQ LP on CW almost daily at RST 599.

It turned out to be a very good choice. At the west end of my shack grows a mature Cootamundra Wattle. Its trunk is almost 10 metres long well over the roof of my shack. I inserted a long thick self tapper into the trunk at 2 metres above ground. I connected the inner of a 50 Ohm coax to the self tapper with the outer connected by a length of braid connected to a metal spike driven into the ground at the base of the tree. A check with a DX200 communications receiver found maximum noise and signals in the 20 metre band. I then connected the coax to the input of an FC700 ATU which was connected to the input of the FC757 automatic ATU feeding my FT757GX.

The FC700 was used as an antenna tuning unit feeding the automatic FC757 tuner which was used to make sure the SWR was within the safe operating range of the FT757GX. Later I was able to use only the FC700 direct to the FT757 to achieve a suitable match.

The FC700 was adjusted to give maximum received noise at 14.017 MHz and the transceiver was tuned to a signal close to the frequency. Adjustment was then made for best received signal with the FC700 but with the auto tuner switched out of circuit. The tree antenna is now resonated to 14 MHz. The FC757 auto tuner is then brought into circuit in series with the FC700. With about 10 watts drive the auto tuner is used to achieve a match indicated by the two green lights. Now the full 100 watts can be run. With all units indicating 100 watts the SWR was 1.4:1 which was much better than I expected. I tuned to 14.017 ready for the French station to make his almost daily call call on long path in the late afternoon.

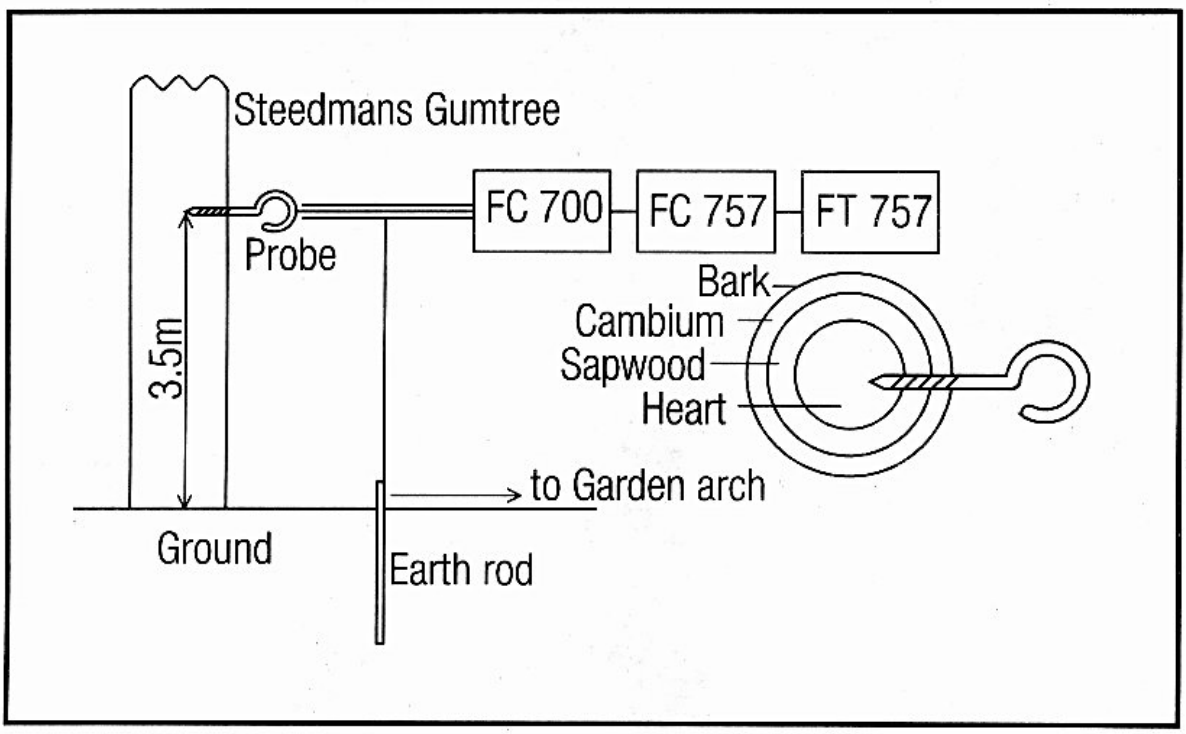
On 5th October 1998 at approx 0700 UCT F8AH calling CQ LP answered my first tree call. Signals were RST 539 QSB 339 and we made a complete QSO and exchanged QSL cards direct. Conditions on 14 MHz were fairly good and the band just opened up.

Having proved that a tree can work DX under fair conditions especially when the tree is an acacia type with a trunk that curves over the top of my shack that has a corrugated metal roof, not really ideal conditions, I think John Williams would like it, I decided to find a better situation. I have 4 gum trees in my garden all of them on the remote side of the shack. The nearest one is a Wallangarra white gum, a monster with a huge trunk and lots of foliage. So I put a piece of wood into a large wheelbarrow, put my standby FT101E onto the wood and took my FC700 ATU and the longest screw in probe I could find.This was a large ceiling hook. For power I used an extension lead from the shack.

The tree trunk was enormous so I got a step ladder and managed to get the probe screwed into the lowest bough about 4 metres up. I connected the coax braid to the metal wheelbarrow. I set up the FT101E and the FC700 and found the system resonated

continued next page

continued from previous page



to 80 metres. I then QRV'd for a while with quite a good SWR and VK2MAI in Wauchope heard my signal on 3.528 MHz. Now the point is I want to find a tree that resonates to 14 MHz. Well I struck lucky. About 4 metres from my front verandah a Steedmans gum tree grows which my XYL planted about 40 years ago. It has a long trunk with a kind of delta formation of branches at the top. Now according to VK2AAE's diagram of the cross section of a tree bole it is obvious that that a probe has to go right through the sap into the heart of the bole.

I went to the hardware store and found exactly what I wanted - a probe with a screw section that would suit my purpose. The length of the screw section equals the radius of the tree trunk. The round flange ensures the probe is into the tree heart when fully screwed in. It is stainless steel and a really solid job. It is no good putting the probe into the base of the tree. I screwed it in 3.5 metres above the ground.

The next problem was to connect the FT757 rig to the probe via a long length of 50 Ohm coax right across the roof of the house and connect to the probe with a very strong clamp. The earth lead was 3.5 metres long connected to a metal spike at the base of the tree. I loaded up the FT757 and the FC700 and to my delight the tree was OK for 20 metres. I made a CQ DX call and back came HB9KAR giving me RST 539. Then DL5FCZ gave RST 549. I then decided to set up the FT757 rig and the FC700 on the front verandah which must be in a better situation reducing the coax feeder to about 4 metres. Using the new set up I got RST 559 from RW3XW, F6CEL, and F0GPT. I was still dissatisfied.

I mounted a 2 way coax switch and erected a three quarter wavelength sloper so that I could switch from the wire antenna to the tree antenna. I reckoned that my ultimate success depended on a really good earthing system. I connected braid in parallel with the earthing spike to a large stainless steel garden arch adjacent to the tree. This required a hole to be drilled in one leg of the arch for an attachment screw. The four legs of the arch were strapped together. To my delight the signals went up a couple of strengths. I carefully set up the 757 and FC700 for minimum SWR of 1.3:1. I called CQ and ZL1AW gave me RST579. Then VK7CW gave me RST 599. During the QSO with one of these stations I reduced my output to 10 Watts and still got 559. 20 metres was not yet open for DX . Later in the afternoon I went for DX contacts and the results were pretty good. JA7XGI/P RST 559, T32VU RST559, TI2OY RST 559, IK5ALZ RST 559, and F8AH RST 579. I compared the tree with the three quarter wave sloper and found that the strength only improved S1. That's good enough because the tree acts as a vertical antenna. I checked the radiation pattern with a field strength meter and got a circular pattern pretty average except to the east . There is my corrugated iron roof west of the tree so I took no notice of that.

On 4th February 1999 I QSO'd with DJ7AA who gave me RST 559 whereas I gave him RST 569. I have decided to use the tree as a permanent facility. The sloper remains as a useful addition and can be used on other bands.

Important details about the probe. First of all determine its exact length as follows. Measure the circumference of the tree trunk exactly where the probe is to be screwed in . Then work out the radius . This will give you the length of the probe. Screw the probe in at 3.5 metres height but not fully. This is very important.

The probe must not go through the exact centre of the trunk but remain a small distance back. The probe is not right through the centre. I use a large stainless steel alligator clamp to connect to the probe which is 8 mm in diameter. Any hardware store stocks these probes and it is the screw in part which must equal the trunk radius. I removed the auto ATU from circuit feeding the tree using only the FC700 ATU and the FT757GX and it works perfectly. My log reads 2 pages of DX QSO's. Also during my experiments I asked VK4RAN to listen for me on 7.022 MHz and he could not hear my signals yet he could hear me on the helical I have connected to the FT101E sitting next to the FT757GX and I reckon there was proof enough there that a tree has a resonant frequency. The only other consideration is that a tree is a calm weather antenna so don't expect it to perform efficiently in the pouring rain or when a strong wind is blowing.

ar

ALARA

Christine Taylor VK5CTY ALARA Publicity Officer
16 Fairmont Avenue, Black Forest SA 503
Packet: VK5CTY@VK5TTY email: geensee@picknowl.com.au

Olympic countdown

Great news on 5WPM

Have you heard the great news about the new agreement between the WIA and the ACA with regard to the Morse Code requirements?

Before the Sydney Olympics it will be official that current holders of a Provisional Amateur Operator's Licence will be permitted to use all the bands and conditions now only allowed to holders of an Unrestricted Amateur Operator's Licence.

This means that more people (and more YL operators) will be able to operate on the HF bands.

With so many overseas visitors coming and planning to come to Australia for the Sydney 2000 Olympics why not pass the good news to everyone you talk to on the HF bands now that soon you will be able to operate anywhere within the amateur bands. It will make the whole system more user friendly.

The members of all the committees who have worked to make this change possible should be congratulated and thanked by us all.

For ALARA it will make our regular Monday night and committee nets easier if it allows us to use the upper section of 80 metres which are less populated simply because they are not available to everyone. With propagation so variable from one end of Australia perhaps there we will be able to find frequencies which do not suffer from so much interference from overseas commercial stations especially in summer.

Particularly the VK4 girls have a real struggle to hear the Southern states in summer because of strong commercial stations near the frequencies we are forced to use now. It is considerably to their credit that these girls continue to try to join the Net so regularly.

Thank you.

ALARA'S involvement in The John Moyle Memorial Field Day

This year again AHARS participated in the John Moyle Contest and again the VK5 girls who are also members of AHARS played their part.

Tina VK5TMC and Christine VK5CTY were there for the whole weekend with Leslie XYL of Hans VK5YX and Meg VK5YG was there for most of Saturday.

While the YLs were largely involved in feeding the operators at regular intervals they also picked up the microphone from time to time. Tina was even keen enough to get up in the wee small hours and put out some calls in the hopes that there were some other night owls listening. I believe she made three or four contacts all of which count.

International YL2000 in Hamilton NZ.

By now you will have paid you deposits but you may still be trying to decide whether or not to go on one or more of the tours. Some information supplied by Deb VK5JT after her trip to New Zealand at Christmas time may help you decide.

Deb found the Hula falls and the Waitomo caves some of the highlights and she loved the hot springs area of Rotorua. She didn't go on a four day tour of the Bay of Islands as is being offered in October but she enjoyed the one day cruise she did do. She says she saw Moturoa, Black (volcanic) Rocks, Oihi bay, Motuarohia (or Robertson)Island, Motukiekie, Otehei Bay and much more, including delivering mail to several islands and still had time for a long picnic lunch on Urapukapuka Island which has several high points which afford spectacular views across the water. It all sounds lovely.

We are told that reciprocal licences can be obtained by visiting licensees so if you take even a handheld you should be able to 'meet' some of the locals on the 2 metre repeaters.

For the Auckland area this is 146.900MHz where a regular net is run on Sunday evenings at 7.00pm local time.

As the time approaches more information will be included in these notes.

More Olympic news

YLs who have postcodes in the Sydney area may find they are being chased on the radio during the latter half of Year 2000.

ALARA members in the defined postcode area are:

VK2AMJ Marjorie, VK2DB Dot, VK2HLF Fran, VK2INZ Nina, VK2PXS Bobby, VK2YL Norma and VK3AYL Rae.

Also keep an ear open for VK2TC Wendy postcode 2157.

Sydney Gold - The Gathering Of The Nations Award

Members are encouraged to gain this award. Details are on page 45.

The VKDX Association offers this award to all stations in and out of Sydney who can make 30 contacts with Sydney stations during the last six months of this year, 2000.

The Sydney area is defined as in the following postcodes: 2000-2249 2560-2570 2745-2770

The award is issued in three levels:-

Gold for contacts on three or more bands

Silver for contacts on two or more bands

Bronze for contacts on one band.

All bands and modes may be used.

Repeat contacts with one station cannot be made in less than 24 hours.

Repeaters may be used.

Applications for the award and proof of contacts are by General Certification Rules.

Details should show: callsign of the station worked, band, mode, signal report and postcode, UTC time and date.

Two licensed amateurs are to certify that the log extract is correct.

To claim the award, send details with $10 to

The Secretary,
VKDX Association
P 0 Box 299
RYDE NSW 2112

If you need further information please write to John VK2DEJ at the above address or phone 9809 5686

ar

LF Receiving Converter with Loop-stick Antenna

Drew Diamond, VK3XU
45 Gatters Rd.,
Wonga Park, 3115.

Photo 1: External view

Interest in LF techniques appears to be gaining momentum. Specially licensed experimenters have been transmitting LF test signals in our region, and Amateurs in some European countries have had access to an LF allocation for a few years now. Indeed, the latest RSGB Handbook now has a substantial chapter devoted to LF, which perhaps indicates the level of interest there.

As with any radio work, it is necessary to gain some preliminary understanding of propagation by listening for stations on that band. Signals from amateur/experimental transmitters are generally much weaker than the navigation beacons there. In addition, electrical noise, even in a leafy residential suburb can be very high. Unfortunately, LF band performance on some general coverage receivers may prove inadequate for serious listening. A simple wire antenna will bring in many of the beacons, along with a galaxy of noise spurs from electrical appliances in the neighbourhood. Unless the receiver has a very remarkable IF filter, and/or some pretty fancy signal processing, it will be very difficult to winkle out weak signals.

One of the simplest, and most effective tools in our fight against noise is the loop antenna. Traditionally, a timber (or plastic) frame of perhaps 0.8 square metre, is wound with insulated copper wire, the inductance of which is capacitively resonated, and coupled to the receiver's input. The frame loop has a sharp null running through the axis of the loop, which often allows interfering noise to be placed in the null without serious loss of the wanted signal (see Refs. 5, 7, 8).

However, because of size, the frame loop may be awkward in some circumstances, and is not particularly portable. A reasonable alternative is to use a much smaller ferrite-rod "loop-stick" antenna. Although not as sensitive as the frame (smaller area, therefore more RF gain required), similar nulls are obtained off the ends of the rod.

The following converter circuit is offered as a simple device that gives listening access to the LF region. A reasonably sensitive and selective shielded HF receiver which tunes the 3, 4, 5, or 6 MHz bands is required as "tuneable IF". In operation, the device is remarkably sensitive, and should prove quite satisfactory for reception of amateur signals in the happy event that in due course we obtain an LF band allocation (see Ref. 4 for an excellent source of LF information). Whatever the outcome, the converter allows you to observe propagation characteristics in the 140 to 400 kHz region.

Circuit

See Fig. 1. A high Q coil, wound upon a ferrite rod, couples into the magnetic field component of incoming signals. When the inductance of the coil is resonated at the frequency of the signal, an RF voltage is presented to the high impedance gate of the MPF102 FET amplifier. The 100 pF capacitor is included to by-pass any strong TV signals which may be present.

The amplified signal at the drain is applied to one input port of an NE602 (or SA602 or NE612) Gilbert-cell mixer. An internal crystal-controlled oscillator of 3, 4, 5 or 6 MHz translates the LF band up to a corresponding HF band. For example, when using a 3 MHz oscillator crystal, a signal on 177 kHz will appear on 3.177 MHz (these round-number crystals are available from several of the electronics suppliers as cheap, standard, computer types). IF output signal appearing at pins 4 and 5 is coupled to the tuneable IF receiver via broadband impedance matching transformer T1.

Construction

A suggested construction method is depicted in Photo 1, which shows the prototype housed in a plastic jiffy box measuring 197 x 113 x 63 mm. These are obtainable from several of the electronics merchants. The ferrite rod measures 10 mm dia x 200 mm long (see Parts below). Wind on 165 turns of #24 B&S (0.5 mm) e.c.w. Start and end may be held in place with masking tape. The rod is installed lengthwise in the box, which is drilled exactly rod diameter each side, and held captive with a blob of epoxy cement at each end. Remember to allow for interference-free operation of the variable capacitor.

The variable capacitor is an ordinary two-gang 450 pF per section broadcast type, salvaged from an Australian BC valve set (for years I had believed that these were 415 pF, but most in my junk-box measure about 450 pF). They are not rare items, and may be found at ham-fests, or swapped from radio mates. Make a suitable cursor and dial/knob for the frequency scale.

continued next page

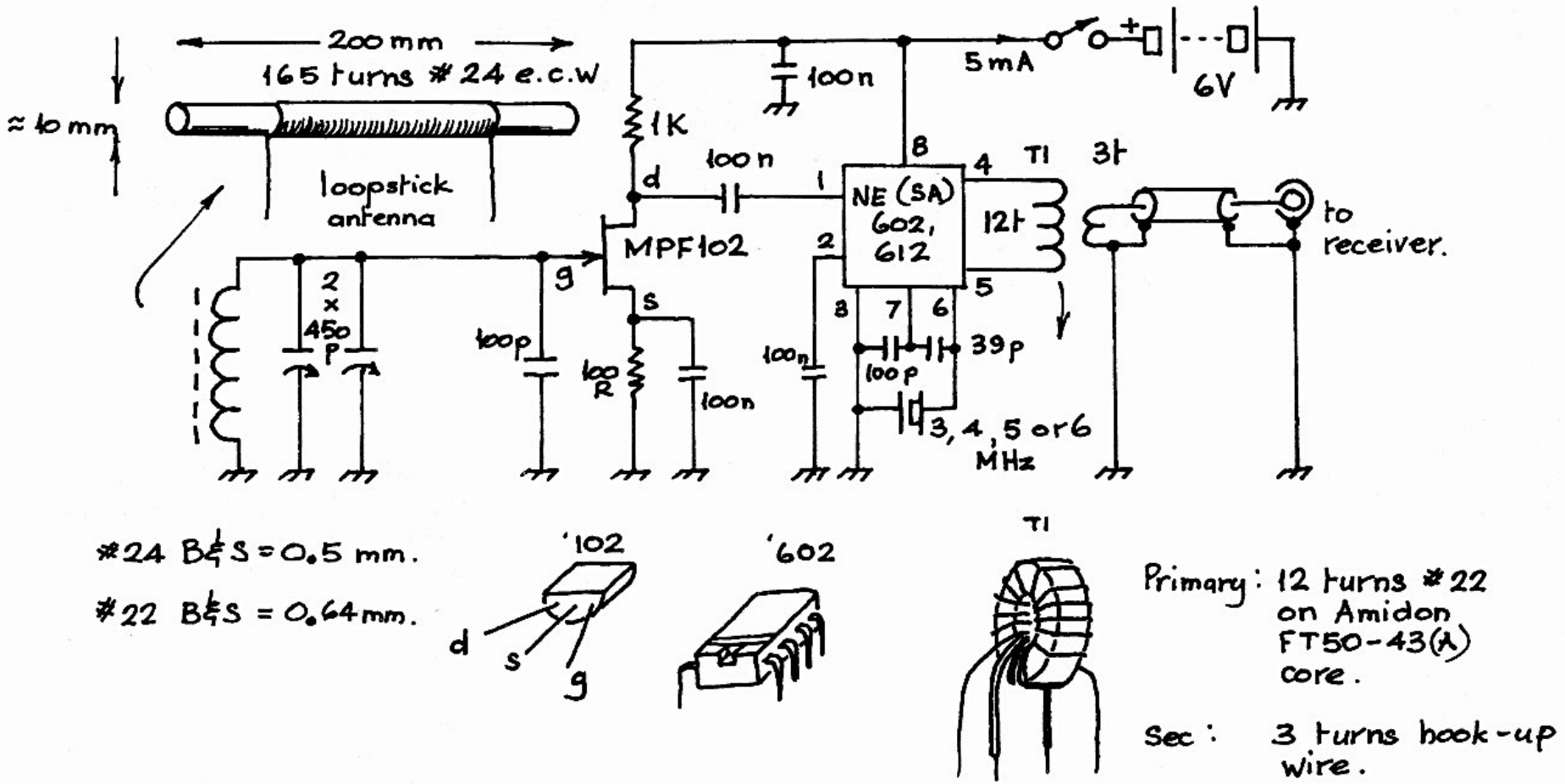


Figure 1: LF Recieving Converter with Loopstick Antenna

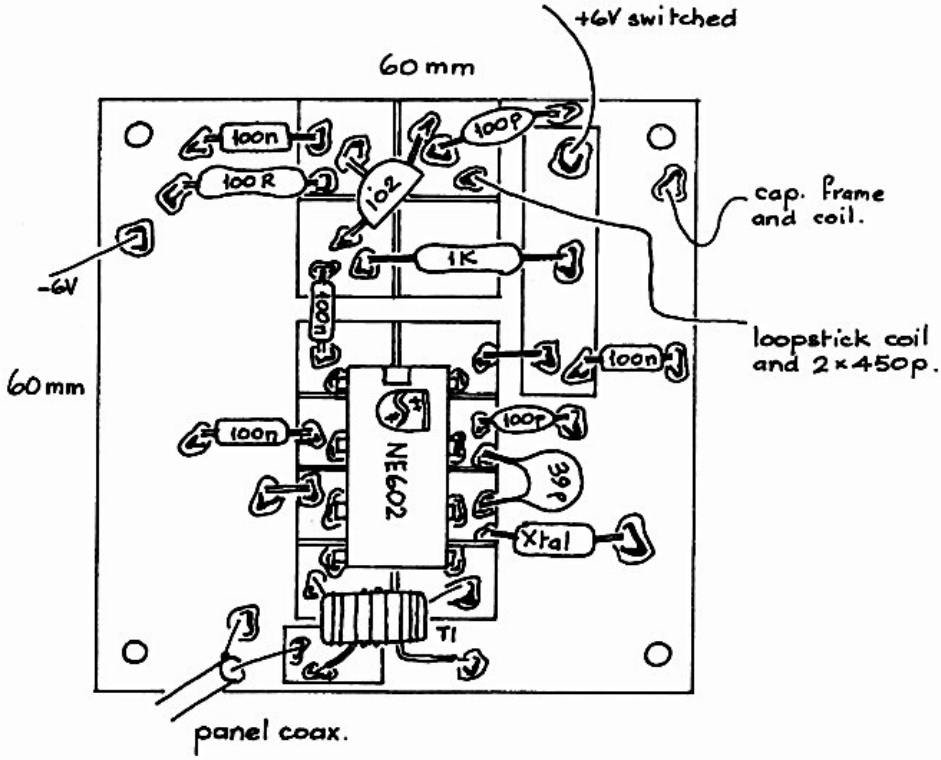


Figure 2: Board Layout

continued from previous page

The circuit is accommodated upon a paddyboard (see Ref. 10), and a suggested layout is shown in Fig. 2. The NE602 is fitted into an 8-pin wire-wrap IC socket (pins gently flared) which in turn is soldered to a substrate board. But any other method that you favour should work, provided that signal connections are kept reasonably short. A battery of four type AA cells in a four cell holder is affixed to the outside of the box with cable ties. Battery switch and output connector are fitted into the front panel.

Operation

Check all wiring and component connections. Connect the converter output to your receiver input using a suitable coax cable, and set the receiver to the appropriate band. Switch on. Tune the receiver to crystal plus about 250 kHz. Adjustment of the variable capacitor should cause a strong sharp peak in noise as the loop-stick is resonated. Search the band for signals, re-peaking as you go. When one is found (probably a navigation beacon with AM Morse call-sign), peak the converter capacitor for maximum response. The set-up should sound "lively", there typically being many beacons found. Their call-signs give a clue to locality. Here near Melbourne for instance, in addition to the local signals, I can easily hear FLI Flinders Island, BHI (Broken Hill), DVO (Devonport) and SMI (Smithfield) airfield beacons. Amateur/experimental transmissions have recently been made from AX2TAR in Moonah, Tasmania on 176.5 kHz. Listen also for ZL signals on about 177 kHz.

Local signal strengths are remarkably constant, and vary little from day to night. At night the back-ground static noise level increases significantly, sometimes making it difficult to hear weak signals. If interference is experienced on a particular frequency, rotate the converter box to place the interfering source in the sharp null.

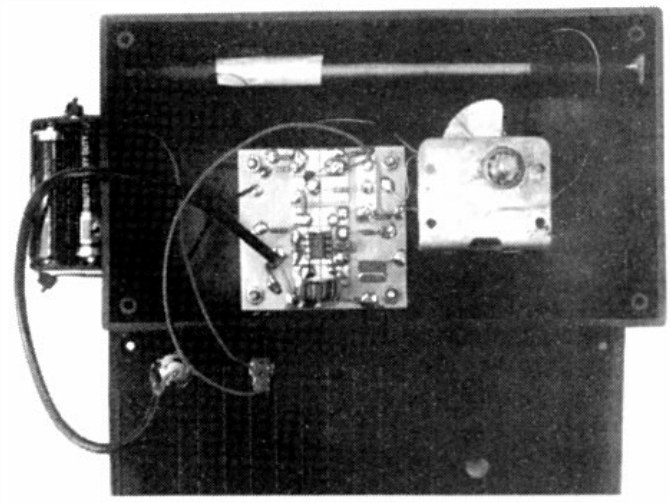


Photo 2: Internal View

Parts

Most of the components are available from the familiar merchants such as Altronics, Dick Smiths, Electronic World and Jaycar. NE(SA)602 chip and 10 x 200 mm long ferrite-rod (other suppliers may have something similar) are available from Electronics world (ph 03 9723 3860- will answer mail orders).

References and Further Information

1. Radio Communication Handbook, 7th edition (Ch 7); RSGB.
2. The LF Experimenter's Sourcebook: Dodd, G3LDO (Ed.); RSGB.
3. Secrets of RF Circuit Design; Carr; TAB Books (from DSE).
4. VK2ZTO's LF Home Page, check out; http://www.zeta.org.au/~ollaneg/aussielf.htm.
5. "Around the Loop"; Marris, G2BZQ, Prac. Wireless (PW) May '95.
6. "A Ferrite-loop Converter for 150 to 500 kHz"; Marris, Short Wave Mag. June '96.
7. "PW Helta- An Experimental Loop Antenna"; Marris, PW Feb. 96.
8. "Small Loop Antennas for MW, LF and VLF Pt 1 & 2"; Carr, Elektor June/July '94.
9. "External Ferrite Aerial Unit for SW, MW and LW Radio"; Marris, Elektor May '93.
10. Paddyboard Circuit Construction" Diamond, AR Feb. '95.

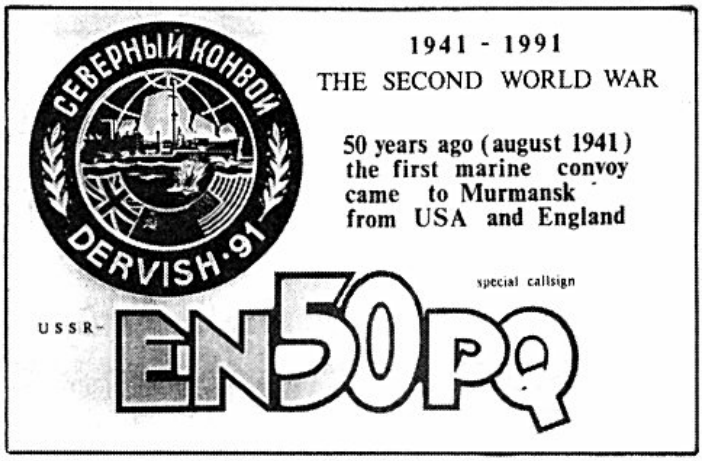
ar

QSLs from Russia and England

Ken Matchett VK3TL
Honorary Curator
4 Sunrise Hill Road
Montrose 3765

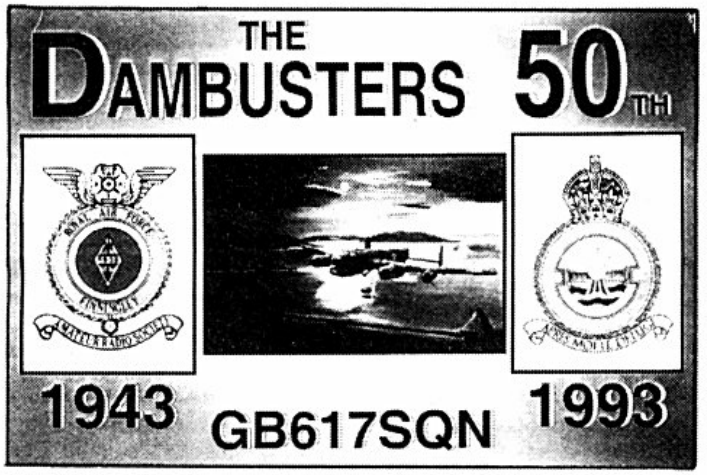
EN5OPQ

This QSL card from European Russia, courtesy of the Polar Club amateur radio station UZ1ZZZ in Murmansk celebrated the first of many naval convoys carrying vital war supplies to the port of Murmansk, an ice free port and the largest city north of the Artic Circle. Due the success of the early U-boat attacks on allied shipping in the North Sea. The system of convoys was introduced thus reducing the vulnerability the merchant ships. Shipping losses in the early part of the war were considerably, due principally to the presence of powerful German cruisers and battle cruisers and the lack of protective cover. To give one example, on 4 July 1942 the greatest convoy disaster of the war occurred when 23 ships out of 34 of convoy PQ17 were sunk. After this disaster, convoys were suspended until the autumn when long hours of darkness in northern latitudes enabled them to fare much better. The two Russian words at the top of the accompanying picture read "Northern Convoy". The code word of the convoy was "Dervish", whilst the flag of the participating nations are also displayed.



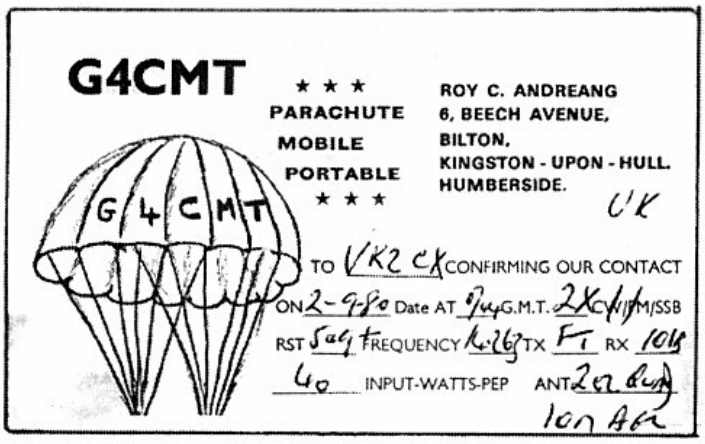
GB617SQN

Multi-numeral GB (Great Britain) prefixes will not be new to most DXers. These have varied from GB1 to GB800. The national QSL collection having received no fewer than 23 different GB prefixes. The accompanying copy is of QSL GB617SQN which celebrated 50 years since the historic RAF air raid in the evening of 16 May 1943. The Lancaster bombers were from the newly formed 617 Squadron. It was the squadron's first operation and was against the Ruhr dams in north west Germany. The Amateur Radio Society at Finningly organised this special radio event from the Derwent Valley in Derbyshire to commemorate the occasion and remember those lost in the operation. The location has special; significance since many of the 617 Squadron practice runs were made there.



G4CMT

Although mobile operation is particularly common nowadays, this was not always the case. In some instances special licences had to be obtained and even special callsigns used. For example years ago mobile G calls used the prefix GX and more recently Switzerland used the prefix HB1 in place of HB9, and Norway LB in place of LA. Canada used the prefix VE0 to indicate mobile stations while Iberia used EL0. there seems no limit to the ingenuity of mobile operators for we have received QSLs from tractor mobiles, bicycles mobiles and aeromobiles. Station G4CMT was the first station in the UK to make a parachute mobile QSO. It was carried out on Roy's 55th birthday and was his first parachute jump.



Thanks

The WIA would like to thank the following for their kind donation of QSL cards to the collection:

Mavis VK3KS
Barry VK3XV

and friends and relatives of the following silent keys:

Norm Eadie VK3UP courtesy Arthur VK3VO
John Murray VK3AJY courtesy Peter VK3DI
Jack Anderson VK3JA
Arnold Wilkey VK3AGW

ar

One Active Device Competition — AHARS Competition

Remember the Crystal Set Competition run by the Adelaide Hills club last year? Well in 1999 they ran a competition for an electronic gadget made using just one active device.

What device you used was left to your choice. It could be a valve, a transistor or an IC. It could not be a diode. That is considered to be a passive device. The resulting 'gadgets' were as varied as the devices used.

Two people chose to make a one valve radio receiver, but there was quite a difference between the actual type of receiver made. Steve VK5AIM had made a regenerative receiver for 80-metres using a valve, a 12AU7. Neil VK5NTO had made a general purpose broadcast receiver. It used a 1Q5, an even older valve type. Both builders used as many old, genuine parts as possible, Steve even found an old radio cabinet in which to build his unit. Both re-discovered the forgotten 'health hazard" of flicking solder'!! Do you remember that, too? Neil also showed us a model radio controller in which he had used a 3A5 valve.

The circuit for the mike pre-amp is also shown. This unit was made as an add-on for a rocking-arm microphone on a TS520 transceiver and used a 2N3819 FET. Geoff VK5NDZ, now VK5JDZ no longer has to have the mike gain control wound up to full. How do you like his lovely description of a FET (Fundamental Electric Thing)?

"It has a garden gate, a front door and a back door. As the voice is heard at the garden gate the inhabitants inside the FET gather at the front door to see who is making the noise at the gate, then rush out the back door together making a great deal more noise. "!!!

Lloyd VK5BR had made a TRF receiver. His receiver used a Lockmoss F4069. An HF receiver designed for testing crystals used a CA3046. The same IC was also used to make a signal generator for HF.

A simple scanner for your house made by Lyndon VK5TTL now VK5SWR, used an LM3909 oscillator. The add-on BFO made by Alby VK5TAW used a 3704. This is one of the projects he actually made up before he got his licence. He used a cigarette tin as the chassis illustrating the fact that you do not need to buy new materials to build things. I wonder how many others used tins like this to house their early projects (in the days before they became too sophisticated)?

The active device used and the useful article made varied with the needs or imagination of the maker.

Ted VK5KBM got a bit carried away. He made up three versions of a Field Strength Meter. One of them used a 557 transistor. One was only useful for tests within the shack the other two could be used for field measurements as well, depending on the accuracy or complexity of the measurements required. The circuits are attached for you to try.

Geoff VK5TY, who teaches others to get their licences, made a Five Cycles a Minute Oscillator with meters to show the wave motion and the variation in that movement when resistors, capacitors (or coils) were inserted in the circuit. The device used for this was a TL702. Because of the limitation of the competition this, as shown, only illustrated the effect of a resistor or a capacitor in a circuit. To illustrate the effect of a coil a complex sub circuit using at least one more active device, is needed. Perhaps the full circuit will appear in a later issue of Amateur Radio.

Two pieces of test equipment were made, a Time Domain Reflectometer for testing the impedance of, and possible defects in cables, for which Jim VK5XJT used a 74LS14 step generator. For the two-tone tester that produced oscillations on 1900Hz and on 700Hz a TL087 was used.

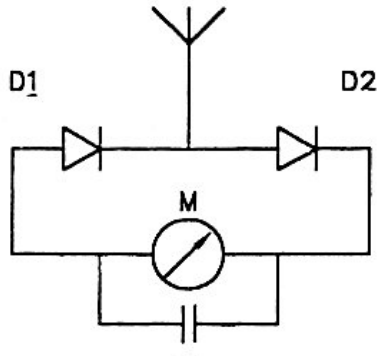
Each of the makers had to demonstrate and explain their 'gadget' and answer any questions from the members. It was a very interesting and informative evening. I am sure many people went away determined to 'have a go' at the next competition. Maybe other clubs would like to take up the idea, too. The devices used and the ideas would be just as varied as these were, for sure.

An audio oscillator won the competition by popular vote. It used a 555. Jeff VK5MFR hung a detector over the rim of a coffee mug which he then filled with water. When the with water level reached the detector it triggered the oscillator. It is intended to help blind people to pour a cup of tea or coffee for their guests without burning their finger.

The very simplicity and usefulness of this apparatus is probably what appealed to the voters.

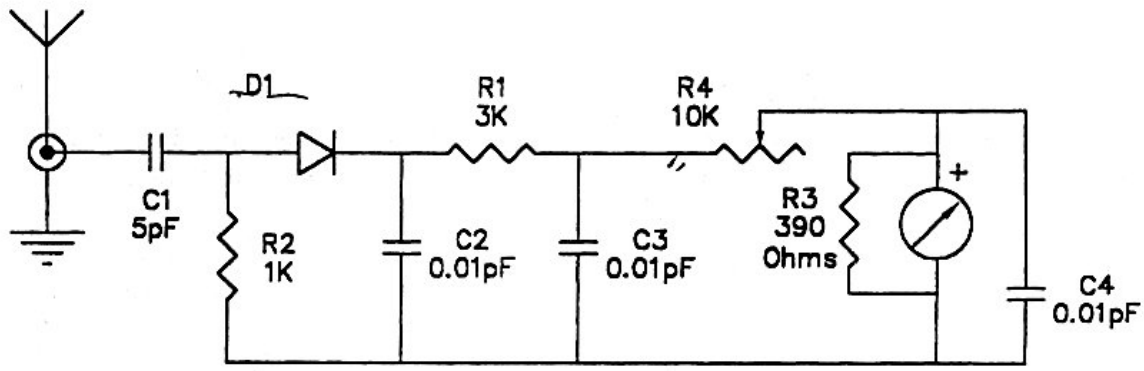
ar

FIELD STRENGTH METERS VK5KBM

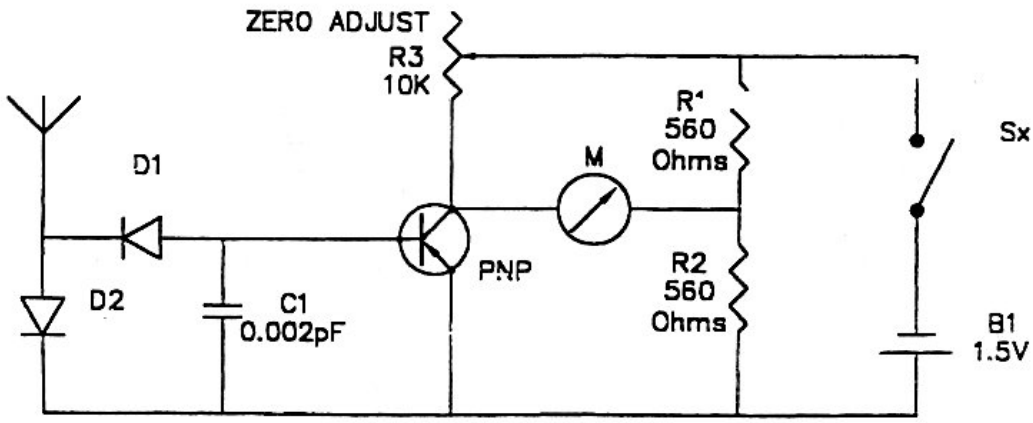


LEVEL EDGE METER

BASIC, VK5AHI F.S.M.
IN SHACK MONITOR



ELLIOT METER F.S.D. 250uA
SHACK AND FIELD



TRANSISTORISED
SHACK AND MORE SENSITIVE FIELDWORK

Figure 1

Two Old Squares into Four Squares

Steve Mahony VK5AIM

Two Old Squares Steve VK5AIM and Colwyn VK5UE, when preparing for another field day realised that one way to improve points scores was to work more squares from more squares. Points on the UHF bands had better multipliers; so that getting close to neighbouring squares became the criteria for selecting an operating area.

Adelaide is in PF95 and the corners of PF95 were looked at for convenient locations. The SE and NE corners are in the Murray mallee country, low elevations; the SW corner is in St Vincent Gulf, too wet and the NW corner is near Kulpara at the head of St Vincent Gulf, a location used for UHF/VHF operations by VK5s.

A look at the road maps showed the area had a good road system and an elevated site looked possible. A recce was organised to see the lie of the land. We took along a small portable 2m beam, the dual band Xcvr in the vehicle and a dual band handheld. Operating sites were located in each of the squares QF84,QF85,PF94 and PF95.

To save time later we decided to mark the points where latitude 34°S and longitude 138°E crossed the roads. So with Steve driving and Colwyn reading the odometer we drove from road intersections until the estimated position was reached and graffited a tree with white spray paint to mark the crossing point. Later we though it would be wise to check with a better map, so 4 maps and $30 poorer and the inaccuracy of the road maps for our purposes became clear. However we had seen the country, so choosing new sites was not hard.

Steve VK5AIM operating the Base PF95, Spring Field Day 1999

The Kulpara area is close to the Locheil Repeater. The Bumbungle range gave some elevation and a clear line of sight to the Adelaide area could be achieved. We were able to access all the Adelaide metropolitan repeaters.

On one of the drive arounds we met one of the local farmers in the customary Ute complete with sheep dog. He wanted to know what we two silly old buggers were up to? A short explanation comparing VHF/UHF Amateur Radio with UHF CB, Yagi Antennas and repeaters and all was understood. Farmers are great users of UHF CB. Once you get away from the Big City there are no "Ratbags" on the channels and it can be used as intended.

So it was decided to go ahead. We would operate two stations on 50,144 and 432 MHz one fixed the other mobile. One of us would stay at the fixed station while the other went mobile to the other 3 squares,

then the roles would be reversed.

Steve VK5AIM had obtained several 150mm fiberglass poles that had been the outer case for mobile phone/ pager coaxial dipoles. Once the copper and brass elements had been removed for salvage/scrap, no one wanted the outers. At 3m long, two joined with an aluminum sleeve made a 6m - 20foot lightweight mast. With a specially made tilting base plate, 2 sets of 3 nylon guy ropes with slipping attachment plates, we had an easily transported and erected antenna support with armstrong rotator. A short extension with a cross arm carried the 2 m & 70 cm vertical beams. The 3 element 6m beam was mounted horizontally below. Colwyn VK5UE insisted that some identification be placed on the antennas to show the front, as on a previous contest he had complained about signal strengths only to be told he had the beam pointing the wrong way! We even attached labels to the coaxes so that the correct antenna was attached to the correct rig. Very frustrating to hear weak signals and has a high SWR, only to find you are transmitting into the wrong antenna! This was the basis of the fixed station. The roving mobile had a magnet mount for whips and a light telescopic mast, with a 3 element 2m yagi, which fixed into a plate held to the ground by running the car wheel onto it.

So for the Spring UHF/VHF Field Day 1999 we carted all this along with batteries, generators, food and sleeping gear up to the chosen site. Unfortunately there was little activity and the location of uncut wheat in paddocks beside the road kept us from the best site to work into the Adelaide area. That however is another story.

ar

The new AR editor, Colwyn Low VK5UE. Portable on 6, 2, 70, Spring Field Day 1999. Working Squares, in PF96. Portable 2M mast/antenna

CLUB NEWS

AHARS NOTES

During March AHARS participated in the John Moyle Memorial Field Day again this year. In total there were nearly 20 members with 16 staying for the whole weekend.

If the enjoyment is anything to go by the club will participate again next year and as we increased our total score again this year we were enjoying the improved propagation as the eleven years progresses.

The number of club members heard was great, too. Each contact adds to the club score and increases their score at the same time.

If your club has not previously worked in the John Moyle, why not give it a go next year. We want more stations to talk to!!

The ideas presented by Joe VK5WU were definitely thought - provoking. He made the point that, as amateurs, our frequencies are under constant threat from commercial interests and that it is in our interests to continue to show the world which way radio will be used in the future.

In the early days amateurs were given all the short waves because the commercial interests didn't think they were of any use. We showed them how to talk across the oceans on these frequencies, so now they are used by all countries and we have lost all but part of each band.

Later we showed the potential use of VHF, computers and digital transmission. Now these have been utilised widely and have given us both digital phones and the Internet and our bands are again under threat.

Perhaps the time is ripe for us to show how to use the microwave bands to their full potential. We should be experimenting and planning our next steps in this area, maybe in the direction of satellite and ground based microwave repeaters, where we have so much bandwidth for experimentation.

If we show that we are using our microwave frequencies we have a much better chance of keeping them. Remember the saying: "Use them or lose them".

REPEATER LINK

Will McGhie VK6UU
21 Waterloo Cr Lesmurdie 6076
will2@omen.net.au
VK6UU@VK6BBR

The pros and cons of a lack of activity

In VK6, there is considerable comment from time to time about the lack of activity on voice repeaters. This lack of activity is not just limited to VK6 but is reflected across Australia. The reasons for this in my opinion are several.

Colour original inserted

Heading the list is the declining numbers of amateurs. Other reasons include a greater variety of hobby things to do these days. Computers top the list and the Internet. I can only look at my activity that has changed considerably over the years. One other factor could be the age shift. As our average age increases due to lack of new younger members, perhaps our interest in using voice repeaters declines. Perhaps some of us are just talked out.

Holidays

Repeater Link is short this Month due in part being on holiday and in part, travel for work. The holiday part includes some amateur radio in the form of taking a hand held on canoe trips. Several salt and fresh water lakes are in prime voice repeater coverage. The novelty of being in a remote beautiful location isolated from civilization, yet talking from the canoe is one of the better uses of our repeater system. There is the problem of finding someone to talk to but in the course of a day one or two contacts eventuate. Usually once a contact is underway other amateurs appear and join in.

The photograph shows one such lake, Lake Preston, about 100 kilometres South of Perth, which has good voice repeater coverage from Mount William on 6900. The lake is very salty and is some 26 kilometres long by an average of one kilometre wide. A long skinny lake close to the Indian Ocean but not connected to it. There is no life in the lake at all (that I could see) with the water being crystal clear with a near white coloured bottom, mixed with shades of yellow, peach, orange, and light brown in places. One unusual contact on two metres was using the hand held while lying on my back in three metres of clear warm green blue water. Being so high in salts the buoyancy allows you to hold a hand held (or mobile phone) high and dry above the water, a most unusual sensation. I bought a half litre of the salty water home and evaporated off the water. The resulting salts filled 16% of the container.

What better way to enjoy amateur radio than being out in such a strange but beautiful location and still being in touch via the local repeater 30 kilometres away?

Note the small 300-mW dual band hand held in the right hand while on the salty "dry" land and the buoyant in the water photograph making a telephone call. I hope the photograph does some justice to this most unusual lake. If not have a look at it on my Web page at www.omen.net.au/~will2/lake-preston.htm.

ar

INTRUDER WATCH

as at 8TH APRIL 2000

F.I.W.C Gordon Loveday VK4KAL

Unfortunately this summary is very small. No new observations have come to me from the usual sources of VK4, by my cut off time. Logs will no doubt arrive, too late for faxes. This is the case with the Region 3 report. Time is the factor now, with the Region 3 Co-ordinator being in India ! However, things should improve as all co-ordinators are going over to e-mail, I should be active on this mode by May or June. (Setting up has taken me somewhat longer than expected, new techniques to be learnt etc.)

The March Summary is from VK6 Co-ordinator VK6RO

FREQ	DATE	UTC	Emn	Sinpo	Remarks
3.650	2702	1305	A3E	35343	N.Korea
14.100	2902	0210	J3Eu	55555	n/amat, Indonesia
14,210	0103	1340>	A3E	55555	H2/7.105
18.075	2103	1253	A3E	43344	H2/9.0375
21.285	1203	1303	A3E	44444	UIBC stn

I hope my comments in March AR have not fallen on deaf ears. I do not make these comments lightly to fill up space. I would like them taken seriously and acted upon. Otherwise, I am wasting my time and that of those who go out of their way to assist Intruder Watch in VK, namely our Government Monitoring Service.

My Freepost No 4 is still valid. A. G. Loveday, RUBYVALE. Queensland 4702.

ar

ARDF

Ron Graham VK4BRG
PO Box 323 Sarina Qld 4737

Animal Tracking Frequencies

From time to time we hear about, or see something on TV, regarding animal tracking .. or DF'ing. Some of these DF type applications were discussed in an earlier column .. see AR May 1998.

It may be of interest to be aware of which frequencies are used. Some time ago I obtained from the ACA a list of frequencies, applications and power levels relating to Class Licensed Low Interference Potential Devices (LIPD's). Some interesting facts from that list:

FREQUENCIES .. range from 9kHz to 5.875GHz .. with some extremely narrow band segments to others which are reasonably wide.

APPLICATIONS .. range from "all transmitters" to various specific applications.

POWER LEVELS .. range from 30 picowatt to 1 Watt.

The popular VHF frequencies used, and ones which I have some experience with, are in the band from 150.7875 to 152.49375 MHz where a maximum EIRP of 100 mW is permitted. Also, with this power limit, is the band 173.29375 to 174 MHz.

In the lower UHF region, with a maximum EIRP of just 10 µW, are the bands 225 to 242, 244 to 267, 273 to 303.95, 304.05 to 328.6 and 335.4 to 399.6 MHz.

So the popularity of the 151 MHz band stems from the wide band available and the reasonable allowable power limit. Should one wish to be involved with, or assist others (possibly university departments involved in animal tracking), that will probably be the frequencies involved. Fortunately, the band is reasonably close to the amateur 2 metre band, so similar techniques may be used.

My Last Column.

For a variety of reasons, including the fact that I will be overseas for a considerable period, this will be my last column. Jack, VK3WWW, the Australian ARDF coordinator, has kindly offered to continue. He is in Melbourne where there is quite a lot of ARDF activity, so hopefully, with the assistance of the others, some interesting ARDF type information will result. In the future, I may be I may be able to contribute something from time to time. I am sure that Jack would welcome input from anyone with ARDF related items of interest.

Introducing Jack, VK3WWW.

Jack has been kind enough to forward the following background on himself,

"I was first licensed in 1990 and during my first year in this new hobby I was fascinated by the monthly foxhunt reports on VK3BWI the WIA Victorian broadcast station. It was not long before I was getting gear together and contesting the monthly mobile foxhunts. Since first becoming an Amateur I have taken on a few roles mainly with my local club but more recently the position of WIA Region 3 ARDF Coordinator. As a coordinator I have found it fascinating, especially dealing with other society coordinators. I hope to be able to keep the column as interesting as it has been for the period that Ron has been presenting it. On behalf of the ARDF community I would like to thank Ron for all the work and time he has put into the ARDF column, and wish him well on his new venture."

Contact information for Jack:

Email: vk3www@alphalink.com.au

Phone: +61 3 98732459 Fax: +61 3 94281589 Mobile: +61 0408037065

China Update.

Jack also reports there are now 3 persons heading off to China for the Region 3 ARDF championships. The event is being held in Nanjing, which is west of Shanghai. It is an interesting area of China where four of us from North Queensland participated in some ARDF activities back in 1991.

We wish the three Australian contestants every success.

ar

DON'T MISS THE ACTION!

VX-IR 2m/70cm Micro Handheld

One of the worlds smallest dualband handhelds, just 47 x 81 x 25mm (W.H.D.) including a high capacity 700mA/H Lithium-ion battery! The VX-IR covers both 2m and 70cm amateur bands, plus offers AM/FM and TV sound reception, 2 hour fast charging as standard, simple settings and a large LCD screen.

Features

- Tx: 144-148, 430-450MHz
- Rx: 0.5-1.7MHz, 76-300MHz, 300-580MHz, 580-999MHz (cellular locked out)
- Output: 2m/70cm 0.5W (at 3.6V), 1.0W with external DC
- 291 memories, most with alpha naming
- AM, FM(n), and FM (w) reception modes
- CTCSS encode/decode
- 31 smart search memories
- Tone search for CTCSS and DCS
- Includes FNB-52LI 3.6V 700mA/H Lithium-ion battery, regulated AC adaptor/charger, antenna and belt-clip.

D 3665

YAESU

$399

2 YEAR WARRANTY

VX-5R 6m/2m/70cm Deluxe Hand-Held

Tiny yet incredibly rugged, the VX-5R provides 6m, 2m and 70cm amateur band operation with 5W output as standard (4.5W on 70cm), made possible by a unique PA design and a super high capacity 7.2v 1100mA/H Lithium-ion battery. Plus, ultra-wide coverage VHF and UHF as well as AM medium-wave and shortwave reception facilities are provided, along with a large backlit dot-matrix LCD screen. All this in a diecast aluminium enclosure just 58 x 87 x 28mm WHD (without knobs or antenna)!

Features

- Tx: 50-54, 144-148, 430-450MHz
- Rx: 0.5-1.8MHz, 1.8-16MHz, 47-729MHz, 800-999MHz (cellular blocked)
- Full feature keypad, CTCSS encode/decode, digital code squelch
- Comprehensive menu system
- Over 200 memories
- 8 digit alpha-numeric memory labelling
- 5 battery saving systems, plus Tx/Rx usage monitor
- Spectra-Scope™ for monitoring adjacent channel activity
- Comes with FNB-58LI Lithium-ion battery, flexible antenna and AC adaptor/charger

D 3670

YAESU

$699

2 YEAR WARRANTY

BONUS BONUS BONUS

Purchase a VX-5R during April or May 2000 and receive a CD-15 Desk Rapid Charger (D 3672 valued at $49.95) at no charge!

Yaesu FT-90R 2m/70cm micro mobile

Another engineering breakthrough from Yaesu – a tiny dual-band mobile rig with high power output, a remoteable front panel, and a rugged receiver front-end. The FT-90R provides 50W RF output on the 2m band as well as 35W output on the 70cm band, a solid diecast casing with microprocessor controlled cooling fan for reliable operation, and a large back-lit LCD screen, all in a package measuring just 100mm x 30mm x 138mm.

Also includes:

- Wide dynamic range receiver for greatly reduced pager breakthrough
- Huge receiver coverage – 100-230, 300-530, 810-999.975MHz (Cellular blocked)
- 180 memories and a variety of scanning functions
- Built-in CTCSS encode/decode, battery voltage metering
- Designed for 1200 and 9600 baud packet operation
- Tiny remoteable front panel (requires optional YSK-90 separation kit)
- Includes MH-42 hand mic, DC power lead, and easy to follow instructions.

D 3312

YAESU

$899

2 YEAR WARRANTY

YSK-90 Front Panel Separation Kit D 3317 **$129.95**

FOR ALL YOUR COMMUNICATION NEEDS

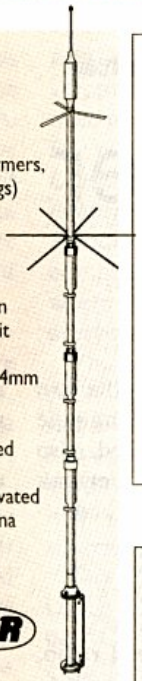
Rugged HF 5-Band Trap Vertical Antenna

The rugged 5BTV incorporates Hustler's exclusive trap design (25mm solid fibreglass formers, high tolerance trap covers and low loss windings) for accurate trap resonance with 1kW (PEP) power handling. Wide-band coverage is provided on the 10, 15, 20 and 40m bands (SWR typically 1.15:1 at resonance, <2:1 SWR at band edges) with 80kHz bandwidth typical on 80m at 2:1 SWR. An optional 30m resonator kit can be installed without affecting operation of other bands. High strength aluminium and a 4mm (wall thickness) extra heavy-duty base section guarantee optimum mechanical stability. At just 7.65m, the 5BTV can be ground mounted (with or without radials, although radials are recommended), or it can be mounted in an elevated position with radial system. Unlike other antenna designs, the 5BTV can be fed with any length of 50-ohm coax cable.

D 4920

$399

HUSTLER



30m Resonator Kit

Adds 30m coverage to the 5BTV and includes all hardware.

D 4921 **$99.95**

6m 1/2 Wave Base Antenna

A rugged Australian-made vertical antenna designed to cover the 51 to 54MHz range, with minimum SWR around 53MHz. Built using high tensile T81 grade aluminium, it's just 2.9m long with a sealed base section and 100W minimum power rating. Complete with mounting hardware.

D 4825

D&G Antennas

$69.95

2m Heavy Duty Base Station Antenna

For use where long-range omni-directional 2m band (144-148MHz) coverage is required. This 3.4m long 1/2 wave over 1/2 wave colinear vertical antenna provides approx. 5dB gain, and is housed in a very tough single-section fibreglass radome for all-weather protection. The strong aluminium base section is fitted with an N-type socket in its base for coax cable connection.

D 4822 BENELEC

$139.95

WIA Callbook

Wide range of information for Australian Amateurs plus callsign and address listings.

B 2344

NEW **$17.95**

ARRL Handbook

77th edition of this famous publication. Incredibly wide range of information for operators and constructors.

B 2237

NEW **$59.95**

FT-2500M 2m Heavy-Duty Transceiver

Built tough to take the rough stuff, the Yaesu FT-2500M meets US MIL-STD 810C for shock and vibration so it'll provide years of reliable mobile operation. Its easy-to-operate front panel design, rubber coated knobs, and large Omni-Glow display are teamed up with a one-piece diecast chassis to set the FT-2500M apart from other 2m mobiles. For improved front-end performance, Yeasu's exclusive 3-stage Advanced Track Tuning feature and dual-FET mixer reduce overloads from strong signals while providing excellent sensitivity and wide-band receive operation.

D 3632

Also includes:

- 31 tuneable memories
- 7 selectable tuning steps
- Various scanning modes
- In-built CTCSS encoder
- MH-26 hand mic, mobile mounting bracket and DC power lead.

Specifications:

Frequency range:	Tx 144-148MHz, Rx 140-174MHz
Output power:	50W, 25W, 5W
Sensitivity:	better than 0.2uV for 12dB SINAD
Image rejection:	better than 70dB
Max audio output:	2.0W into 8 ohms (10% THD)
Dimensions:	160 x 50 x 180 (W.H.D)

2 YEAR WARRANTY

YAESU

$499

LOW PRICE

D-130J Discone Antenna

Covers the frequency range 25-1300MHz and comes with mast-mounting hardware and instructions. Easy to assemble and install with extensive stainless steel construction making it extremely durable. A wide frequency coverage means that it's ideal for scanning receivers, as well as transmitters up to 200W PEP for the 6m, 2m, 70cm and 23cm amateur bands. Uses an SO-239 coax socket for easy coax connection.

D 4840

$179

DIAMOND ANTENNA

PHONE FAX AND MAIL ORDERS

PHONE: **WITHIN AUSTRALIA: 1300 366 644** (Local call charge)

FAX: **(02) 9395 1155** within Australia and **(+612) 9395 1155** from outside Australia

MAIL: **DICK SMITH ELECTRONICS**, Direct Link, Reply Paid 160, PO Box 321, North Ryde NSW 1670 (No stamp required)

direct link

Visit our web site at http://www.dse.com.au

Excludes packaging and postage. All major credit cards accepted.
14 Day Money Back Guaranteed if NOT completely satisfied. (Software excluded)

DICK SMITH ELECTRONICS

That's where you go!

Yaesu transceivers and accessories stocked in selected stores only. Other stores can place orders on a deposit-paid basis. Offers expire 31/5/2000.

915 DPS s/c

SPOTLIGHT on SWLing

Robin L. Harwood VK7RH
5 Helen Street,
Newstead TAS 7250 AUSTRALIA
(03) 63 44 2324
e-mail : rharwood@primus.com.au

Discontent as Winter approaches

BBC confusion

Well, we are almost into winter and it has been interesting to monitor over the various frequencies. As expected, the BBC World Service decided to introduce additional program streams to confuse everybody. They went from three to eight and published program times in local times instead of the standard UTC or GMT. Yes I know it was still there but not as prominently. At least the channels used for Australia and the Pacific are carrying the East Asia stream, yet many have found other streams directed to North America or Europe. There was further confusion because streams were put on so many channels that wrong programs were put on to the wrong frequencies, due to some initial teething problems. As well, there is a change in emphasis. One frequency that has been dropped, I notice, is 7145 kHz from 0600 to 0810 UTC.

At the same time these changes were introduced, the new BBC Director-General, Greg Dyke, announced that there was going to be another re-organization of the BBC, increasingly concentrating on programming and over 1500 jobs would go across the entire Corporation, primarily at the middle management level.

The pain of unkind cuts

Across the North Atlantic, the "Voice of America" in Washington, also was experiencing some pain with some retrenchments following the curtailment of some language services. In October, the Deutsche Welle in Cologne also cut staff numbers and some language services, due to budgetary constraints.

Now the smaller stations are also feeling the winds of change. Trans World Radio (TWR) decided to close studios in Guam and opt for satellite feeds for KTWR. Also FEBC Radio International in Manilla also decided to cut live English language programs and also go to satellite feed. Also I believe that the Adventist Radio Network are also opting for this delivery method.

Portishead Radio closes

Many will have heard Portishead radio, which has gone by callsigns such as GKA, GKB, GKE etc. will be saddened to hear that British Telecom (BT) closed this historic station on April 30th at 1200 UTC. It became a casualty of the economic rationalism within the BT organization, which is a commercial enterprise and no longer in state ownership.

Portishead, along with PCH in the Netherlands, has been there since the early days of wireless. That leaves only WCC, formerly located at Chatham, Mass (Cape Cod) as being the only remaining pioneer station still operating. It started in the first decade of the 20th Century. WCC is part of the worldwide Globe Communications Network and is remotely operated from California. The location of the senders is now in Maryland. WCC is now mainly on Clover or SITOR (Telex over Radio). KPH in California was a sister station and I have not heard it since it was merged with KFS in San Francisco, also part of the Globe empire.

Frequency changes

Here are a few frequency alterations I have picked up since the beginning of the A-00 period. Radio Netherlands is now on the air to Australasia on 9795 kHz from Bonaire, up only 5 kHz from 9790, and on 12065 and 13710 kHz from sites in the Russian Far East. The times remain unaltered but note that the first half-hour in devoted to News and Current Affairs. This means that feature programs, such as "Media Network" now start on the hour. Ulan Bator in Mongolia is on in English on 12085 between 1030 and 1100 UTC. The Voice of Thailand is in English to Australia on 9885 from 1230 to 1300 UTC. Belgium is on 9865 kHz to Australia from Petropavlosk in the Russian Far East. It is very good too.

Egypt is on to Australia and Asia in English on 17595 from 1215 to 1330 UTC and in Arabic specifically for Australia on 11990 from 2000 to 2100 UTC.

Budapest in Hungary is on 21560 from 1000 to 1100 UTC and from 2000 to 2200 on 11890 in Hungarian. Rome in Italian is on from 1000 to 1100 via Singapore on 11920 kHz. Even Swiss Radio International now broadcasts from Singapore to Australia on 13735 from 1100 to 1330 UTC.

The Voice of Russia World Service used to be the easiest station to find on shortwave up to ten years ago but now it is so elusive. The latest channels I have for Australia are : 9945 15510 15460 15560 from 1200 to 1400 UTC but 15460 is not on after 1300 UTC.

Well that is all for this month. Until next time, the very best of listening - 73 Robin L. Harwood VK7RH

Division News

Forward Bias: VK1 Notes

Peter Kloppenburg VK1CPK

Our guest speaker on the 20th of March was Ian Hayes. Ian is the manager of the Spectrum Marketing Division of the ACA. In this role, he is across all the various ways in which the RF spectrum is being divided up amongst the users of it. Ian explained in detail how portions of the spectrum are allocated to users and how some sections of it are sold by auction.

This last bit was a bit frightening to hear when we heard the sums of money that were being paid at these auctions. Particularly so, when we realise that the amateur bands are free to us. We heard that the ACA's vision is for an efficient, competitive, and self-regulated use of the spectrum by the communications industry. Including user safeguards and industry developed technical standards. Ian said that the pressure is on for more available bandwidth in the near future as the use of mobile telephones and other forms of personal communications increases. He mentioned in particular the frequency bands of 800, 1800, and 3000 MHz.

In these bands and in others, demand is higher than supply. Therefore efficiency is served when portions of the spectrum are sold by auction. However, auctioning of the spectrum does not apply to the HF bands up to about 75 MHz. Here are a few new terms for your vocabulary, as used by Ian: *Winners Curse*; applies to a person who most highly overvalues product at auction, *Simultaneous Ascending Auction*; computer-controlled system of auction where all participants are kept informed of everyone's bid.

This last system was implemented by the ACA, together with its own variants and improvements. Ian provided us with the address of the ACA's website that deals exclusively with spectrum licensing. Here it is: http://203.37.2.230 Ian's own email address is: jhayne@aca.gov.au

The Canberra Amateur Packet Radio Group (CAPRG), which is associated with the ACT Division, is having regular weekly meetings. At one of these, Thursday, October 21, 1999, some important decisions were made. The group elected an interim chair, as Mike Walkington (VK1KCK) was being posted to the USA for three years as from January 2000. Richard Watts (VK1SW) is interim chair. A permanent chair will be elected later in 2000 when membership numbers have settled down and a new venue for the meetings has been found.

Mini-profile: His name is Tex Ihasz, VK1TX. Tex is successful in his pursuit of amateur radio. He got his DXCC in 1997 in addition to WAS, WAC, and WAZ. He also runs the Australian New Zealand Africa (ANZA) net on 14.183 MHz from 05.00z, and for 15 minutes starting from 04.45z, the 15 metres net on 21.205 MHz, especially for Novices. In addition to this labour of love, he runs the 20 metres Southern Cross DX Net on 14.2265 MHz every night from 10.30z. As if this is not enough, Tex has just started his new Webpage. It is still under construction, but nothing stops you from having a look at it. You'll find it at http://web.one.net.au/~vk1tx Have a look and tell him what you think of it. ***Flash-Flash:*** *As the General Meeting and Trash & Treasure were cancelled for April due to the Easter break, the next Trash & Treasure will be held at the General Meeting in May.* The next General Meeting is on May 22, 2000, at the Griffin Centre, Civic, Canberra City, at 8:00 pm. Cheers.

VK2 Notes

The Division has made available the callsign AX2000 for use by affiliated clubs and members outside of the period of the Olympic and Paralympic Games. Application forms, with sample log sheets have been sent out to clubs, and may be obtained by individuals by contacting the office. Periods are for a week at a time (Monday to Sunday). The Division will be operating a special event station for the Games from the headquarters station at Wigram Street Parramatta, which will be available to visitors daily during the Games period, and manned by a roster of volunteers. This roster is being organised by Stephen Pall VK2PS, the Divisional Special Projects Officer. If you are interested in offering your time, please contact Stephen.

The internet education course run by Ron Bertrand, VK2DQ, is attracting a great response with well over a hundred students. There are too many students for Ron to supervise fully, so the Division has organised a group of tutors to take several students each, and other amateurs throughout Australia are also acting as tutors. The course is based on the video course that Ron recorded at the Gladesville Amateur Radio Club some years back. In that course Ron lectured to live classes of up to 30 students at a time while being recorded. The "amateurradiopr" list is being used as a discussion group so why not subscribe and join the fun.

The Dural site is being refurbished and upgraded — looks much improved with a coat of paint. A great job being done here by volunteers from the Dural Committee.

The 6m, 2m and 70cm beacons are now transmitting through horizontally polarised, omni-directional antennas mounted on the top of the main building at a height of about 5 metres. They will be transferred to the top of the western 20m pole sometime this year, along with the 10m beacon antenna. The 10m beacon is currently operating from a vertical antenna on the old tower adjacent to the transmitter building.

The 6m beacon, currently on 52.420 MHz (with FSK ident), will be moved to 50.299 MHz (with CW ident) to avoid an obscure intermodulation problem with the new 6m repeater. This repeater has been operating since late December last year.

The most recent addition to Dural systems is the new 10m repeater. This is a joint venture with the Nepean Amateur Radio Group. There is a receiver on 29.540 MHz at Riverview, linked on 70cm to a 25 watt transmitter at Dural on 29.640 MHz. DX has already been worked into VK6 and North America. so dust off your old 10m FM rig and have some fun as sunspot activity reaches its maximum.

Pat Leeper VK2JPA
patleep@bigpond.com

VK3 Notes

By Jim Linton VK3PC

Annual General Meeting

The AGM of WIA Victoria will be held at St Michael's Hall, corner Victory Boulevard and High Street, Ashburton, Wednesday, May the 31st, at 8pm. A meeting notice and annual reports were included as an insert in the April edition of AR magazine. The notice and reports were posted directly to those financial members who do not receive AR. Financial members are encouraged to attend the AGM and be among the first to take advantage of the Members Only section on the WIA Victoria website to be launched next month. Registration applications for this new membership service will be accepted on the night.

WIA Victoria needs your support more than ever at this time, and one way to do this is to attend the AGM. It is intended that those in attendance will receive a report on the WIA Federal Convention held at the end of April - a topic that had been of keen interest to members at the 1999 Special General Meeting, and the past AGM's.

Come along and meet the new 2000-2003 council, hear about plans for the next three years, and after the formalities stay to chat with fellow members over a light supper.

New direction in the interests of members

WIA Victoria has started the new millennium with a major review of policy that has the potential to affect all members and the ongoing operation of WIA Victoria. In 1989 the Council initiated forward planning that resulted in making WIA Victoria one of the most financially successful WIA Divisions. We have come a long way since 1989, and it is now time to review all our policies and ensure that members are the ones who ultimately benefit from Council's prudent management. In the past decade WIA's assets have increased from around $280,000 to $745,000. Unfortunately due to changes in the hobby and economic circumstances, membership numbers have fallen in that time from 1750 to 1200.

During the good years in the early part of the decade, WIA Victoria was able to achieve a substantial boost to its income from the interest payments from investments and trading activities in various fields. To enable us to do this we had been able to afford professional office management and the services of a Chief Executive Officer. Indeed the whole management policy has been thoroughly professional.

The effect of forthcoming changes to the taxation system - namely the Goods and Services Tax - and greatly increased costs of operation of the Federal WIA, coupled with low interest rates, and a general reduction in trading income, all adversely affected the finances of WIA Victoria in 1999.

There is no positive change likely to this situation in the foreseeable future. Members will recall that WIA Victoria strongly opposed the large increase in fees imposed by the Federal WIA on pensioner members for the provision of AR Magazine.

Whilst we were unsuccessful, the Council believes that our older loyal members deserve special consideration. WIA Victoria intends to heavily subsidise these members.

Council is also anxious to increase access to services by members and will be giving consideration to opening the office for a short time on Saturdays, dependent on the availability of suitable volunteers. Whilst WIA Victoria has achieved a high degree of financial stability and a substantial asset base, the Council review of operations concluded that our income level was no longer able to pay for the use of salaried office staff.

Members interests would be better served if we returned to the use of a voluntary labour resource. It is intended that from the 1st of July 2000 the WIA Victoria office will open Tuesdays and Thursdays from 10am until 2.30pm and dependent on the availability of a suitable volunteer, on Saturday from 10am to 12.30pm.

Morse code watch

The adoption of 5wpm Morse code as an amateur licence requirement for full HF band access is spreading throughout the world. The ACA has given "in principle" support for this to happen in Australia. Some 12 months ago the ACA did not support any change in the licence requirement.

It had let it be known that its preference was to wait until the outcome of the World Radio Conference in 2003 when the mandatory Morse code licence requirement is expected to be reviewed.

However, a global trend of adopting the 5wpm standard was established late last year, and the ACA became more receptive, and ultimately responded fully to a WIA submission seeking a lowering of the code speed. WIA Victoria and all other WIA Divisions worked hard during a six-week period to reach a point of unanimous support for a new WIA policy in support of 5wpm. It was the view that the matter should not wait a further four months for the WIA Federal Convention and a postal motion was most desirable.

Almost immediately after the last vote was cast for the postal motion which set a new policy for the WIA, it made a submission to the ACA. In response the ACA wasted no time in considering the WIA's views, and soon after proposed that 5wpm be adopted.

A few critics of the WIA had their say on the packet network and on the phone bands. Any fair minded person looking at what has been achieved should be in praise of the work that the WIA carried out on their behalf.

Some had a bleat about the failed motions at the 1999 Federal Convention that sought a new policy on the Morse code requirement. The claim made repeatedly is that had those motions been passed, Australia would have led the world, rather than just been a follower. I think not. The fact is that 12 months ago there was insufficient support for lowering the code. As for Australia being a follower, I know this is far from the truth. Many European nations have taken close notice of the WIA's achievement, and the information is helping them now as they seriously look at the code issue. Our neighbours in South East Asia and Asia are also examining the WIA experience as they consider how best to overcome the resistance of their radio administrations to lower the code. The IARU Region 3 conference to be held in Darwin in August is certain to discuss the matter.

Broadcast producer(s) wanted

The VK3BWI broadcast needs a new producer to help share the work. The role does not necessarily involve being an announcer, but anyone with that ability could also read their bulletin. A producer needs to write a broadcast text that runs 25 minutes which is about 3,000 words.It takes about a week to compile a bulletin that consists mostly of very short general interest text written for the spoken voice. Apart from the council news which usually heads each broadcast, and the odd bit of club news, a producer also has to be a newsgatherer, and have basic word processing and Internet surfing skills. Email facilities are essential. If you would like to be a producer please send an email to the above address with a subject line of "Broadcast Producer".

"QRM" VK7 Notes

As a consequence of a very well attended Annual Meeting held in Hobart at the end of March we have some changes in the executive of the Division. Our new President (also our Divisional Federal Councilor) is Phil, VK7ZAX, from Scamander on the East Coast. Anyone from the island up north who has met Phil at recent Federal Council meetings will realise that we are very fortunate to have him in this office. Vice presidents are Mike, VK7FB, and yours truly, VK7RN with the secretary/treasurer portfolio combined and in the capable hands of John, VK7RT. We are looking to appoint a minute secretary to ease the load there.

Following the meeting we had a conducted tour of the Australian Antarctic Centre and then we sat down to a brilliant smorgasbord dinner. FOOD !!!. The appetite of some of our hams is amazing. Our Ladies were doing their share too!. The highlight of the night was a great magic show by a very good magician - just ask VK7RO, Richard who became his "bunny". On the whole a very good day hosted by our Southern branch.

Without inferring that all our Tassy amateurs do is eat and have a good time I must now report on the North-west branch's annual barbecue on the foreshore at Ulverstone. About 20 amateurs and their XYL's attended. A beautiful day added to the enjoyment of the great Tassy steaks etc. followed by a 'preloved equipment' auction.

Some pretty cunning foxes have given the hunters some tough work finding them in the weekly foxhunts at the Southern branch. One exasperated hunter was heard to state that he had lived in Hobart all his life and didn't know a couple of the little parks the foxes hid in even existed. Your geography must be improving Mike.

Cheers for now. Ron, VK7RN.

Qnews: VK4 Notes

By Alistair Elrick VK4MV

The Qnews broadcast of 12 May created quite a deal of interest and favourable comment. It was co-hosted by an International array of presenters from the copy put together by Graham VK4BB. With Robert Sudock WB6FDF at the anchor desk in Los Anglos, Jeremy Boot G4NJH in Nottingham UK, from Brisbane John Stevens VK4AFS, to Gavin Reibelt VK4ZZ in Townsville, Rick Warnett P29KFS in Papua New Guinea and in Perth, NewsWest Presenter Tony Savory VK6TS. Text messages were exchanged electronically and voices recorded in Real Audio were returned to assemble the broadcast, which went to air on the Qnews network. A lot of work went into this presentation, which went off without a hitch. Fine jobs by all in organising and co-ordinating this co-operative effort from around the globe.

At the March 25th WIAQ Annual General Meeting, Life Membership of the Institute was bestowed on Alan Shawsmith VK4SS for his life long dedication to Amateur Radio. His interest began at 8 years of age and has not waned after some 75 years. A long time WIA member of 66 years standing and Amateur Radio Historian, he is also the author of the absorbing book 'Halcyon Days' about the early days of AR in Australia and Queensland.

Following this, Merit badges were presented to Long serving Federal Councillor Ross Marren VK4AMJ, QTAC Chairman Paul Hayden VK4ZBV and Office Manager John Stevens VK4AFS for their outstanding service to the WIAQ.

Along with this Distinguished Service Orders were awarded to Bev Clayton VK4NBC, Tom Walker VK4BTW, Col Robertson VK4AKX, Alan Wills VK4YAR, Dale McCarthy VK4DMC, Roger Cordukes VK4CD and Neil Holmes VK4NF for dedication to their work within Amateur Radio and the Division and it's members.

Congratulations to all the recipients.

The Annual General meeting went very smoothly with all scheduled tasks completed in a timely fashion. There was much less of the prolonged debates of past years, as it seems many problems have been overcome with the move to an Incorporated Association. We once again enjoyed the use of the Bronco's Leagues Club for the holding of the meeting, for which we thank the Club most sincerely. Quite a few made further enjoyable use of the downstairs dining facilities for an evening meal, with the usual boisterous re-telling of many 'old radio tales'.

The new WIAQ Council has a full complement of 12 members, with more than half being from outside the Brisbane Metropolitan area. They are Col Gladstone VK4ACG, Dave Jones VK4OF, Bill Riis VK4YCU, Bill McDermott VK4AZM, Bruce Jones VK4EHT all from Brisbane. Clive Sait VK4ACC from Rockhampton, David Eyles VK4KDL from the Sunshine Coast, Trent Sampson VK4TI from Toowoomba, Gavin Reibelt VK4ZZ and Steve Watson VK4SGW from Townsville, Neil Holmes VK4NF from Dalby and Dale McCarthy VK4DMC from Atherton. These members will form the Council for the 2000-2001 year and look forward to further progressing and promoting the Division and the hobby.

The reports as presented to the AGM are all available in full from the Web site. Access via the WIA page http://www.wia.org.au/vk4 at the VK4 page click the WIAQ logo on top left, then scroll down for the link to the reports. On packet the Presidents Report is on page 888, QSL report is on 890 and Qnews Report is on page 892.

With the retirement of VK4 QSL Manager Laurie Pritchard VK4BLE, all QSL cards or QSL Bureau correspondence should be directed only to PO Box 638, Brisbane Qld, 4001. Laurie has asked that no QSL mail be sent to him personally, but be directed via the WIAQ Post Office address to the new QSL Bureau team. Laurie will be continuing to offer a QSL card printing service to Amateurs, contact him on 07 3284 8859 after hours.

From the VK4 Contest Manager Trent VK4TI comes some results of the 1999 Jack Files Trophy, winners are: John Loftus VK4EMM with highest in VK4 and Brisbane's Bayside Club with highest club score, Trophies to be presented as soon as practical.

continued next page

VK4 Notes

continued from previous page

In the position reporting activities of APRS, user numbers are slowly growing as enthusiasts take to the latest available technology with Amateur application and development. Traffic can be found on 145.175 with 1200-baud packet signals. An APRS I-Gate Gateway on the Gold Coast with VK4GO, linked to temporary digi of VK4BBS and the full-time digi VK4DMI-3 up 2000 ft on Ocean View on Brisbane's North side.

Software to get you started, UI-View, is currently free with $20 registration getting you one or two additional bits of the package. Software to upload position reporting to the Pacsat digipeaters on AO16, LO19 and IO26. Look for the program to use your computer soundcard to send Manchester encoded 1200-baud packet data from Doug KA2UPW from the web site: http://members.aol.com/dquagliana/upw/upw105.zip

Cheers from Alistair

5/8 WAVE: VK5 and VK8 Notes

Welcome again to 5/8 wave column. Due to lack of volunteers this column has been absent for some time. However a volunteer has been conned into writing what we hope to be regular monthly news of what is happening in the WIA SA & NT Division.

We would like to welcome Mark VK5AVQ and Andrew VK5EX to the council. Mark has volunteered to be our Minutes Secretary, thus taking some of the work load off our busy Secretary. Andrew was recently appointed as Chairman of WICEN SA and as such holds a position on Council.

At our March Council meeting it was decided to reduce our divisional journal to a quarterly publication. The divisional journal is distributed as an insert to AR Magazine. Those who don't receive AR Magazine still receive a posted copy of the Journal. Colwyn VK5UE our previous editor has moved on to bigger and better things, we wish him all the best as Editor of AR Magazine. Our new editor is Glenville VK5ZCF who has volunteered his services. We extend sincere thanks to all those who have volunteered their time to contribute to the hobby in our division.

Our April meeting was a Morse meeting. Possibly seen somewhat radical in this day and age!

An interesting talk and demonstration on high speed morse code was given by Oleg Bezzoubou, a competitor from the 1998 Hi-Speed CW Championship held in the USA. Our May meeting will be held on 23rd of May, this will be our AGM, a full report will follow in a future column.

Earlier this year the divisional web page was redesigned and updated. The web page carries a lot of useful information including contact details for councilors and divisional services, a repeater and beacon listing, clubs listing and much more. Have a look around when you get a moment. www.wia.org.au/vk5

Also in the internet world a mailing list was established by the division. This is for the WIA SA & NT council to keep members informed of events within the Division and WIA in general, and also as a forum for member discussion. Details of how to join the list are on the divisional web page.

Until next time, Joe vk5uj@qsl.net

ar

Bill Magnusson VK3JT
RMB 1627 Milawa Vic. 3678
Email: vk3jt@amsat.org

Some changes, a launch and a 16th birthday

AMATEUR RADIO SATELLITES.

The AMSAT organisation.

AMSAT (Amateur Radio Satellite Corporation) is a world wide organisation with its roots in the USA. Its origin can be traced back to 1958, just a year after the launch of Sputnik-1. Since that time AMSAT members have been involved in the design, building, launching, commissioning, upkeep and of course, the day-to-day use of amateur radio communication satellites. The parent body is AMSAT-NA (North America) and many other countries have similar special interest groups.

AMSAT-Australia

Our local organisation is known as AMSAT-VK. The National Co-ordinator is Graham Ratcliff VK5AGR.

Membership of AMSAT-Australia.

AMSAT-Australia operates an open membership system. No formal application is necessary and no membership fees apply. From time to time new software, firmware and hardware is developed and distributed through AMSAT-VK channels. Write to the co-ordinator to express your interest or pop up on the HF net.

AMSAT-Australia HF net.

The AMSAT-Australia net meets formally on the second Sunday evening of the month. During the winter months in South Australia (end of March until the end of October) the net meets on 3.685 MHz +/- QRM at an official start time 1000utc with early check-ins at 0945utc. During the summer months when daylight saving is in operation in South Australia (end of October until end of March) the net meets on 7.068 MHz +/- QRM at an official start time of 0900utc with early check-ins at 0845utc. The times and frequencies have been chosen as the best compromise for an Australia-wide net taking into consideration seasonal propagation changes and the various state summer time variations. The net is open to all amateurs, beginners or experienced who have an interest in amateur radio satellites. Help and information for beginners in particular, no matter how trivial, is freely and cheerfully available on this net.

The AMSAT Journal.

An excellent bi-monthly journal is available with formal membership of AMSAT-NA. It contains details of practical projects and ranges over all aspects of amateur radio satellite operations. As of 01Jul00 the cost of AMSAT-NA annual membership will be U$45 payable to AMSAT-NA 850 Sligo Ave, Silver Spring, MD 20910-4702 U.S.A. or you can phone, fax or email your subscription using your credit card. The phone number is 0011-1-301-589-6062, the FAX number is 0011-1-301-608-3410 and the email address is martha@amsat.org

All Communications regarding any matters mentioned above should be addressed to:

AMSAT-Australia.
GPO Box 2141, Adelaide, SA. 5001.
(email, vk5agr@amsat.org)

AMSAT-VK newsletter and HF net.

Readers may have noticed some changes in the information box for this column in the last couple of months. This has been brought about by some structural changes to the AMSAT-Australia group. There are three main changes. Firstly, Graham has ceased production of the monthly newsletter as it was considered to have 'run it's race' in light of the quick and easy access to information provided by the internet. Secondly, as the newsletter consumed the major part of membership subscriptions it was decided to continue the group on a less formal basis, not requiring a subscription. Thirdly, the weekly HF net has been replaced by a monthly net. These changes are reflected in the new information panel at left.

AMSAT-VK Mailing List.

In light of the above changes, this service is available for those with internet email capability. From time to time news may break which affects AMSAT-VK members particularly. New software or hardware or items for sale come to mind as examples. In the absence of the monthly newsletter, Graham has offered to establish an email mailing list for this purpose. Send him an email message if you would like to be included in this list. (vk5agr@amsat.org)

continued next page

Phase 3D ... All in Readiness for the Long awaited Launch.

As you read this the phase 3D spacecraft is in storage in Kourou, French Guyana awaiting its integration with the Arianne rocket which will propel it into orbit in July. Let's all hope we have some good news to relate in the August column. Recent launches by the Arianne-5 rockets have proved to be very successful and this augers well for Phase 3D.

MIR Space Station Re-activated.

Early in April a new crew arrived at the MIR space station. Their job was to get things in readiness for full re-activation of MIR. It is hoped this will include the amateur radio equipment. News regarding this venture has been confusing to say the least. A sort-of 'on-again, off-again' saga. I guess time will tell but fingers crossed, by the time you read this the packet PMS and the occasional voice QSOs may be a reality again.

Demise of the IRIDIUM Satellite fleet.

Although not directly connected to amateur radio satellite work, this has been a hot topic recently on the AMSAT bulletin board. A number of my friends who include 'satellite-watching' in their day to day activities have been following this thread with interest.

The IRIDIUM satellites had been popular among satellite watchers because of the spectacular nature of the flashes that resulted when the sunlight caught their highly polished antennas. Special computer software was available to predict precisely when these flashes would occur at any specific location. Well ... all that has changed.

The IRIDIUM satellite company has gone out of business and the satellites are to be de-orbited. This may have already begun to happen by the time you read this column. There has been considerable discussion on the BBS and on the digital birds about the need to de-orbit the IRIDIUM satellites and some interesting points have arisen.

The obvious first question, why de-orbit? Why not just leave them there? It appears that space in the LEO area is limited and with such a lot of them, they would simply be taking up space which could be used for other satellites. The IRIDIUMs are in a stable orbit and if left uncontrolled they would stay in orbit for many years contributing to the compounding problem of space-junk.

Another popular question, why can't someone else use them? They are very specifically designed beasts; indeed. It would be virtually impossible to re-program them for any other purpose. No other company has expressed an interest in taking them over.

Again, a question. Why can't we (the radio amateur community) grab one or two and use them? It appears that the company is bound by contract to de-orbit them if redundant. This has something to do with conservation of orbital space. The control infra-structure needed to maintain orbital stability would be way out of our league to finance. It is reported to cost millions of dollars per year. Besides that, what would we use them for? They are designed for very high micro-wave frequencies.

One of IRIDIUM's problems has been an on-going feud with the radio-astronomy community due to the proximity of the transmissions to internationally allocated radio astronomy bands. Many countries have refused to licence IRIDIUM earth-stations for this reason. In any case, the spread spectrum technology would put them into the too-hard basket for the vast majority of amateurs.

So it seems they will be driven down into the atmosphere to burn up. There is a problem in that some of the satellites have lost stability and are already out of control and tumbling. For some time avid satellite watchers had noticed that certain IRIDIUM satellites flashes were manifesting themselves as a fast series of weak flashes rather than one longer, strong flash, a sure sign of loss of stability. The de-orbiting equipment on board would probably assume a stable orbit to operate effectively. The out-of-control satellites may not be all that easy to bring down unless this was foreseen in the design phase.

So it looks like the IRIDIUM satellites that flashed brilliantly for us for so long will end ignominiously as a final streak of light across someone's sky. Is that the sound of cheering I can hear from the astronomical community?

OSCAR-11 celebrates its sixteenth birthday.

Since its launch in March 1984, UoSat Oscar-11 has been providing a bonanza of data for educational institutions and for telemetry buffs. It was also the platform chosen to demonstrate the feasibility of digital store and forward type operation on amateur radio satellites. As such it was the forerunner of today's sophisticated high speed digital birds.

After proving the feasibility of digital communications, the design soon became out-dated as subsequent satellites came into service and the digital communications experiment was shut down after a few years of operation. However the telemetry stream is still operating as good as new after 14 years in orbit. This is testimony to the skill of the team at Surrey University who put Oscar-11 together in the amazingly short time-span of six months.

There is a dedicated band of operators around the world who make it part of their day to day activity to monitor Oscar-11's signal and copy the telemetry using a variety of programs which display the data on their computers. They check things like battery voltages and solar array currents and spin-rate. The Whole Orbit Data (WOD) provides a huge amount of detail about the satellite's "health". Seasonal trends can be followed and real-time telemetry can be downloaded as a source of up to date information.

Oscar-11 came into prominence again recently for an entirely different reason. As well as the 2 metre downlink, the satellite carries a beacon on 2.4 GHz. (a pretty far-sighted feature for 14 years ago!). This has been eagerly searched for by operators testing out their "S" mode receive equipment in preparation for the launch of Phase 3D. The Surrey people are to be congratulated for having built a satellite which has successfully bridged the enormous gap between the 80s and the new century. More information on OSCAR-11 is available at the following URL:

http://www.users.zetnet.co.uk/clivew/

ar

VHF UHF AN EXPANDING WORLD

David K Minchin VK5KK
Postal: PO Box 789 Salisbury South Australia 5108
E-mail:tecknolt@arcom.com.au
Web page: http://www.ozemail.com.au/~tecknolt
Fax: +61 8 82346396
Phone: 0414 808060 (before 2130 EST please)
All times are UTC

Equinox Roundup

The last month has been hectic, for me, with trips to VK2, VK3, VK6 & VK8. This column is being written from Darwin in the middle of a substantial F2 event. I have even managed to pack the FT690R for this Darwin trip, managing to work some DX with just the internal whip! The volume of contacts that has occurred precludes the normal reporting detail so I have attempted to summarise contributions by the various VK Call areas that have submitted material.

The expected upsurge in Equinoxial 50 MHz contacts did occur with geomagnetic events leading to TE, F2 & Auroral openings over the period. The major geomagnetic storm on 5/4/00 could not have occurred at a better time setting the pace for the week that followed.

The resultant Auroral display is being proclaimed by many as Cycle 23's most intense, with numerous comparisons of the Auroral displays to the historic March 1989 ones. For those interested in looking at archives on geomagnetic storms will find them listed on the web at...

ftp://ftp.ngdc.noaa.gov/STP/GEOMAGNETIC_DATA/APSTAR/apstar.lst

New South Wales VK2

ED WP4O reports working the following. On 04/04/00 VK2BA 559 CW @ 110Z, VK2BA @ SSB 5/5, VK2BHO @ 2152Z 539, VK2FHN @ 2235z 559 & VK2FLR @ 2251Z.

Numerous VK2 Stations reported working the Caribbean on 9/4/00 with excellent signals.

Andrew VK2TWO reports working V31PC 0055z 5x5 (ek56) on Sunday 9/04/00 from his mobile/portable station, signals 5x4. "I was located at QF56OD. Berry Island reserve, 3km north west of the Sydney CDB. I was running an Outbacker Perth plus on the back of a Nissan Pulsar hatch. 100W pep with an IC706G. Distance is around 13800km. I am very impressed with this result. Especially from the mobile/vertical setup." ... VK2TWO

Queensland VK4

Ray VK4BLK reports ... On 12/3/00 the following was worked/heard by VK4BLK.. 0138Z N6XQ Jack from DM12 539/439 (see further VK6 report), TI5KD 0153 51, TI5BX 0159 51, TI5BX 0220 53, XE2UZL/B 2345 – 0030 Z 529, W1LP/MM EK04 519. On 15/3/00 VK4BLK heard 3C5I/B 2340 – 2353 Z, 429. Reception of this beacon may be the first West Africa long path (over USA) propagation for this Cycle.

On 23/03/00 Wally VK4DO worked TX0DX @ 0730Z 559 & 0851Z TX0DX SSB 55. On 27/03/00 Wally VK4DO worked 9M6BAA @ 0033Z 559 & 0042Z 9M6BAA SSB 59

On 9/4/00 Scott VK4JSR reports the following heard/worked from QG62 - TG9, V31, KP4, W6JKV/5, FO5, XE1, V73, AH8, VP6, J87, VK (1,2,3,4,5,8), ZL (1,2,3), YV, FO0, YN, TI, HP & JA. A total of 18 countries heard, 11 countries worked. During the afternoon, 48.200 and other music channels from South America were RS 59++, leading to the contact with YV.

Adam VK4CP reports hearing the ZD8VHF beacon several times in the Long Path 2300-2330 timeslot around 13/4/00.

John VK4FNQ provides an excellent summary of DX heard and worked on a daily basis, via Email. His collective database must be impressive! The following detail's stations worked by VK4FNQ between 7/4/00 and 15/4/00, including a number of South America stations. John also worked no less than six ZS stations on 13/4/00 around 0700-0715 Z.

On 7/4/00 0257 J87AB FK93, 0308 WP4G FK68, 0311 8P9HW GK03, 0315 KP4EKG, 0316 WP4U FK68, 0526 JA3JM, 2157 KH2KU, 2159 TI5BX EK70, 2201 TI5ALF EK79, 2218 HP3XUG EJ88, 2248 KH2JU, 2252 VK8MS, 2300 VP6BR, 2309 KH8/N0JK, 2313 HP2CWB, 2316 TI2CDA & @ 2330 YV4YC.

On 8/4/00 0240 JA8GGP, 0956 EY8CQ MM48, 1100 VK2BA, 2129 TI2CDA EK70, 2134 TI5KD, 2144 VP6BR, 2244 TI5RVV, 2250 AH8LGV & 2358 YV5LIX. On 9/4/00 @ 0131 9M2/JI1ETU, 0137 9M2/JI1ETU, 1127 JM1AWR, 1304 T88JU, 2354 ZL3TIC @ 2356 ZL4WA. On 11/4/00 @ 0026 YC1HER, 0121 YC5/PA2GFL, 0133 YC1HER. On 12/4/00 0003 YB0AI, 0006 JO6EDD & 0021 YC5/PA2GFL.

On 15/4/00 @ 0256 9V1UV, 0303 JA8GG, 0529 NY6YK, 1413 BV4QI, 1433 L43HR FF76, 1446 LU7FA FF96, 1503 LU7DZ FF78, 1507 LU1DMA GFO5PH, 1511 LU6DLB GFO5PH, 1525 JA8KC, 1531 LU4HT FF76LL, 1534 LU8MB, 1544 VR2XMT, 1549 CE4MLN. All LU and CE contacts were long path, beam 305 deg. NO SHORT PATH SIGNALS!

continued next page

continued from previous page

South Australia VK5

Joe VK5UJ reports ... "On Sunday 9/4/00 Martin VK5GN worked XE1BEF at 0227Z at signals 5 7/8. Peter VK5AWP also worked XE1BEF. On 10/4/00 VK5GN worked V73AT 59 0155Z and XE1BEF 59 at 2313Z. On 11/4/00 VK5GN worked T88JU @ 0030Z 59, T88CL @ 0100 59, XE1J @ 2344Z 59"

"The XE's were very loud, some times 59+10-20db. The XE beacon on 50.022 has been available for hours on end and itself has peaked well over the nine." ... VK5UJ.

Western Australia VK6

I spent a couple of days in VK6 recently and caught up with some of the VHF/UHF operators at Wally VK6KZ's QTH. The VK6 5 & 10 GHz beacons are operation at Wireless Hill, in Perth. The new Augusta Beacon antenna's for 144, 432 & 1296 MHz were also viewed. This beacon location will be activated by next summer. Augusta is at the Western extremity of the SW part of VK6. It is hoped it will provide propagation indication on both the North and Easterly paths.

Wally VK6KZ has since gone portable up the coast and reports the following ... "I left on Saturday 1 April for Camballin in the Kimberley where my son is the Principal of the District High School. I did a little operating on 6 metres on the way north working a swag of JAs from Port Hedland from 08.55 to 12.48 UTC on 3 April and then ZL3TY at 00.24 the following morning. From a bush camp 160 km south of Broome on the same day (4 April) from 09.49 until 10.05 worked 13 JAs and then H44PT at 10.48 followed by VR2XVD and VR2XMt at 12.25 and 12.26 UTC."

"Since arriving in Camballin PH22ca about 250 km east of Broome on Thursday 6 April, I have worked quite a number of JAs and until 15 April a total of 15 countries."

"Contacts other than the JAs include, 8 April 0830 DS1GQS, 1329 VR2XVD. 9 April 1316 T88JU, 1318 9V1JA. 10 April 00.42 YB5QZ, 0658 KH6IAA, 1020 EY8CQ. 11 April 0008 ZL2TPY, 0050 HP2CWB. 12 April 0147 KH7R, 14 April 1308 BG7OH, 1507 S21YJ. 15 April 0949 JY9NX (JY9NX was operating split with him transmitting on 50.093 and listening on 50.150 MHz)."

"One of the most difficult countries to get was VK. Finally made it with VK6JQ at Broome this morning. Have heard VK4FNQ and VK3DUT but couldn't get a contact with either." ... Wally VK6KZ

On 08/04/00 Alex EY8CQ from Tadjikistan, was worked by Jack N6XQ/VK6 (Broome, WA). I had the chance to meet Jack during my VK6 trip. Jack's portable 50 MHz set-up consists of a much modified Mizuho 50 MHz SSB Handheld running 1Watt with packed down 3 element yagi. The complete antenna packs down to 430mm's in length with a PVC tube boom & telescoping whip elements. It can be easily packed into a rucksack. I would have loved that for my VK8 trip so will have to make one too!

On 10/4/00 VK6BE worked YB5QZ (10/4/00) at 0100Z 20 wpm CW. On 11/04/00 VK6BE worked T88JU @ 0008z 50.114 559 599 Op. JA1RJU, FK8CA @ 0052 50.111 559 579 Alain & P29PL @ 0127 50.110 559 579

Northern Territory VK8

On 9/4/00 at 1314Z VK5KK/VK8 worked VR2XVD Hong Kong FT690R 3Watts into the internal whip from the 5th story of a Hotel! VK8OT (Steve VK3OT), at Geoff VK8GF's QTH in Alice Springs, worked VR2XVD at 1317Z. The only station heard from Darwin during my stay was VK8MS. Time precluded much DX working, unfortunately.

On 16/4/00 Steve VK8OT reported having worked 25 countries, on 50 MHz, since his arrival in Alice Springs on 01/04/00

Second VK Station achieves DXCC on 50 MHz

Eric VK5LP reports ... "Following on his recent Japan Century-Cities Award for working 500 cities on 50 MHz (February AR), John Bisgrove VK4KK has achieved another milestone in the form of working 100 countries on 50 MHz. He is the second VK station to do so, the first being Steve VK3OT."

"To give him 100 countries (plus an additional couple for 'insurance', John recently worked the following: 24/3: 2102 TX0DX CW; 25/3: 2103 TX0DX CW; 27/3: 0034 9M6BAA CW; 31/3: 2242 4W6/VK2QF CW, 2245 4W6/VK2QF SSB; 2/4: 2118 CT3HF SSB 5x7. (This latter contact may be a first between CT3 and VK and it's a very long way. Others to work the CT3 were VK4AFL, VK4CV, VK4APG, VK4CP, VK4ZAA, VK4GPS, VK4KJL and VK4PU.) Confirmations will be presented in due course."

"Congratulations to John for this difficult achievement completed after the dedication of countless hours listening to noise whilst awaiting for the sudden appearance of the required new stations. 50 MHz DXCC doesn't come easily to VK stations." ... 73 de Eric VK5LP.

East Timor DX Summaries for 4W6/VK2QF

The following was extracted from a report submitted by Neville VK2QF re his recent visit and operation from East Timor, on HF as well as 50 MHz

"In total during on air time the expected blackouts lasted for 15 hours and one especially on the 4th during a 6 metre opening to Japan removed an hour or 180 contacts! In total the 6m band opened 6 times during the expedition. Total 6m entities 15, total 6m qso's 379."

Breakdown of qso's for 6m. YB = 10, VK = 25, FK = 1, H44 = 2, JA = 316, 4W6 = 1, P29 = 2, 9M2 = 4, 9V1 = 3, V73 = 1, KH6 =4, BV2 = 1, BG7 = 2, VR2 = 6, ZL = 2.

E/W 0 DX was Hawaii at 8,962km and N/S to Hokkaido at 5,971km. HF operation went throughout the period when schedules allowed. HF 2,741 qso's.

"Due to freight delays at the docks my rotator was not available until the evening of the 30th. Masting to hold the 6m NBS yagi was a problem. The antenna is overweight but very robust at 13kg! Ross 4W6UN wanted to move a triangular mast from the Marconi site in town where Thor 4W6MM lives but negotiating through Dili with 5m of steel on the side of a Land Rover would not have been easy!"

"The evening of the 1st of April exposed me to the type of opening that is possible from the tropics. Typically at 1130Z no indicators then weak Malay 48Mhz video is audible at 1140Z, by 1150Z it is strong and the R1 is in! At 1200Z the band is open! JA's everywhere and it's on, 180 worked plus some of the other Asian stuff such as P29, YB and 9M2."

Neville continues ... "Total sincere thanks to ROSS BALLANTYNE 4W6UN for his hospitality. Thanks to JR2KDN, JF2MBF, VK8MS, VK3OT, VK9NS\NL for the kind words of

support whilst I was there.... To conserve and share the most I carried all my food into the country and whilst there caught all my own washing water some of which I drank!" .... Neville Mattick VK2QF,4W6/VK2QF,

2 Metres and Above

Not as much DX to report this month. An opening to VK6AS, from VK5 (Adelaide & Mt Gambier), was noted on 15/3/00

17/3/00. Gordon VK2ZAB worked ZL3TY, ZL2TAL, ZL2VAL and ZL2TE on 2 Metres as well as ZL3TY and ZL2TAL on 70cm, later on 18/3/00. Several VK2 John Moyle Field Day portable stations throughout the day (18/3/00) also made contacts to ZL.

"Several attempts were made by VK2ZAB and ZL2TAL on 23cm with no success. ZL2TAL and ZL2VAL [running 5 watts] were still audible on 2m SSB at this QTH at 0510Z 18/3/00." ... Gordon VK2ZAB.

19/3/00 the Trans Tasman duct was still inplace. Gordon VK2ZAB, Gary VK2KYP and Guy VK2KU worked Nick, ZL1TU on/after 740Z on 2M SSB at S9+ till past 0900Z.

The major geomagnetic storm on 5/4/00 resulted in Auroral Contacts from Rex VK7MO, Kingston, Tas to VK3HY, VK3CAT & VK3BDL on 6/4/00 from 2200 to 2245Z on 144.180 MHz. Other contacts were had however details are sketchy.

Ron VK3AFW reports "..After a number of attempts over several months, last night (10/4/00) Des, VK3CY, worked Tom, EI4DQ, for the first Ireland-Australia 2m EM QSO. He now has worked 73 different stations on 2m EME. Des has previously made the first QSO's on 2m EME into Brazil and Yugoslavia. Congratulations to Des." ... VK3AFW

EME DXpedition to Greenland, OX2K

Only two EME contacts have reputably been made with Greenland on EME.

In the period from 29th of May to 6th of June a group of 25 OZ hams will activate Greenland under the call OX2K on 4 bands.

On 6m OX2K will use 4-el Yagi, 4CX1500 amp.

On 2m OX2K will use 4 long yagis, 4CX1500 amp.

On 70cm will also be 4 yagis, 2 3CX800A7 and LNAs from SSB Electronics. On 1296 OX2K will use a huge dish, shared with other services, so skeds for this band have yet to be set! Further information will be circulated via e-mail and posted on the clusters regarding 23cm.

OX2K has an EME Internet site, where all information about skeds, QSL, donation and so on can be found: http://www.qsl.net/ox2k. You can also send e-mail from the site, to ask questions or to arrange skeds.

OX2K will have 2 stations operating HF on all bands with yagi antennas and amps as well. Operation will be 24h a day, split operation around the IOTA frequencies.

10 GHz Portable.. Hand luggage style!

Doug VK4OE reports.. "I just thought that I would briefly describe that on my recent working trip to Melbourne, I had a nice 75km QSO 'across town' to David VK3XLD operating portable in the Geelong area. The distance is nothing remarkable, but we both got a big buzz out of the contact due on my part having brought my portable equipment in my suitcase from Brisbane, and on David's part that this was only his third ever 10GHz SSB QSO."

"David has around 1 watt and a 57cm dish, and I was using similar power to a 20dB horn antenna. An interesting phenomenon prevailed due to my location not having a clear get-away in David's direction (I don't know Melbourne as well as the locals do, in order to find a preferable operating spot). Best signals were exchanged when I was directing my 20dB horn towards an industrial building almost exactly at 90 degrees to the direct line between us, reflecting the 10GHz energy off the front face of the building." ... Doug Friend, VK4OE.

VK5 DXpedition

Our intrepid explorers, David VK3XLD (recently returned from helping VK2s to some much-needed grids) and Les VK3ZLS have now headed VK5-wards. They will be away for a couple of weeks, and activating a number of grids, including some on the Eyre Peninsula. Bands in use will be only 2m (6-el yagi + 80W) and 70cm (26-el yagi + LNA + 50W). David VK3XLD had worked VK5KK, VK5AVQ & VK5ZBK on 15/4/00 (closing time for the column!) from PF85 to Adelaide .. about 270km's on 144 MHz SSB. More next month.

ACA examines future Microwave re-allocation

The ACA has issued a great deal of information concerning the temporary or proposed re-allocation of various Frequency bands of interest to both Commercial and Amateur Users.

For example, the Olympic restrictions on 70cm in a 150km radius of Homebush, now includes the 440 - 450 MHz band. This is in addition to their existing allocation, from now until after the Paralympics. Existing links can stay, but ATV is off air for the duration.

As an epilogue (for amateurs anyway!) a paper, titled "Radiocommunications Spectrum Conversion Plan (2302 – 2400 MHz) 2000", discusses the future of this former amateur band.

The 1- 3 GHz segment, in general, suffers from the highest amount of existing tenant "displacement". These displaced services are being re-allocated to higher frequency bands or other technologies.

Another paper titled "Microwave Radio Spectrum Trends" acknowledges the high interest level in Microwave allocations as witnessed in the last few rounds of Spectrum Auctions. The 150-page document examines the future re-allocation and expansion of terrestrial microwave allocations for fixed services.

Demand for microwave fixed services, especially above 10 GHz in Urban areas, is growing at 10 – 50% per annum. Telecommunications is the main driver, but also broadband wireless services (Internet access in particular) figure highly.

The only significant threat to amateur allocations, other than the immediate loss of 100 MHz of the 3.4 GHz band, concerns our 24 GHz band. The paper examines the feasibility of allocating 24.25 – 24.5 GHz and 26.5 –27.5 GHz as it's first preference to satisfy demand for BWA spectrum.

Commercially the segment below 23 GHz has been used for some time for fixed links over 5 to 20 km's. Frequencies around 24 GHz are close to the first resonant mode of a water molecule. Consequently, atmospheric conditions are a significant factor in any link budget, however for short haul work the path loss variation can be coped with.

The current amateur allocation is from 24 – 24.5 GHz. While 24.192 GHz is the international narrowband segment, by

continued next page

continued from previous page

gentlemen's agreement the narrowband segment is 24.048 GHz in Australia. 24.048 GHz is the International satellite allocation, so it made sense to have one set of equipment to do both duties.

Copies of the above papers can be obtained from the ACA website @ www.sma.gov.au . The Wireless Institute of Australia will be making a submission for the 24 GHz allocation.

Grid Square Register

Late last year, I suggested that an activity register should be created to help new and existing stations identify whom, what and where. E.g. a Register of equipped stations listed by Grid square, by operational bands above 50 MHz and proposed active bands.

I have gathered an amount of information from submissions over the past 6 months enough to start the spreadsheet. Any list like this will be only as useful as information provided. Its main aim is to provide a locality guide. I realise that the number of grid squares worked is also of interest so that information will also find its way into the spreadsheet

Please send your details by email, by snail mail or by fax. The first draft is to be published in August or September 2000 AR with the full spreadsheet being made available on the Web around the same time.

In Closing

John Bird reports ... "I monitor airlines via ACARS (131.55Mhz). Quite often I will pick up transmission between 2000-3500 kms from my QTH. On the 8th of March I monitored 9V-SMI a Boeing 747-400 of Singapore Airlines over Far West Australia. From the lat/long position transmitted the distance from my QTH was 2,784km." ...John Bird. I would be more than curious to know if anyone else has been logging similar events.

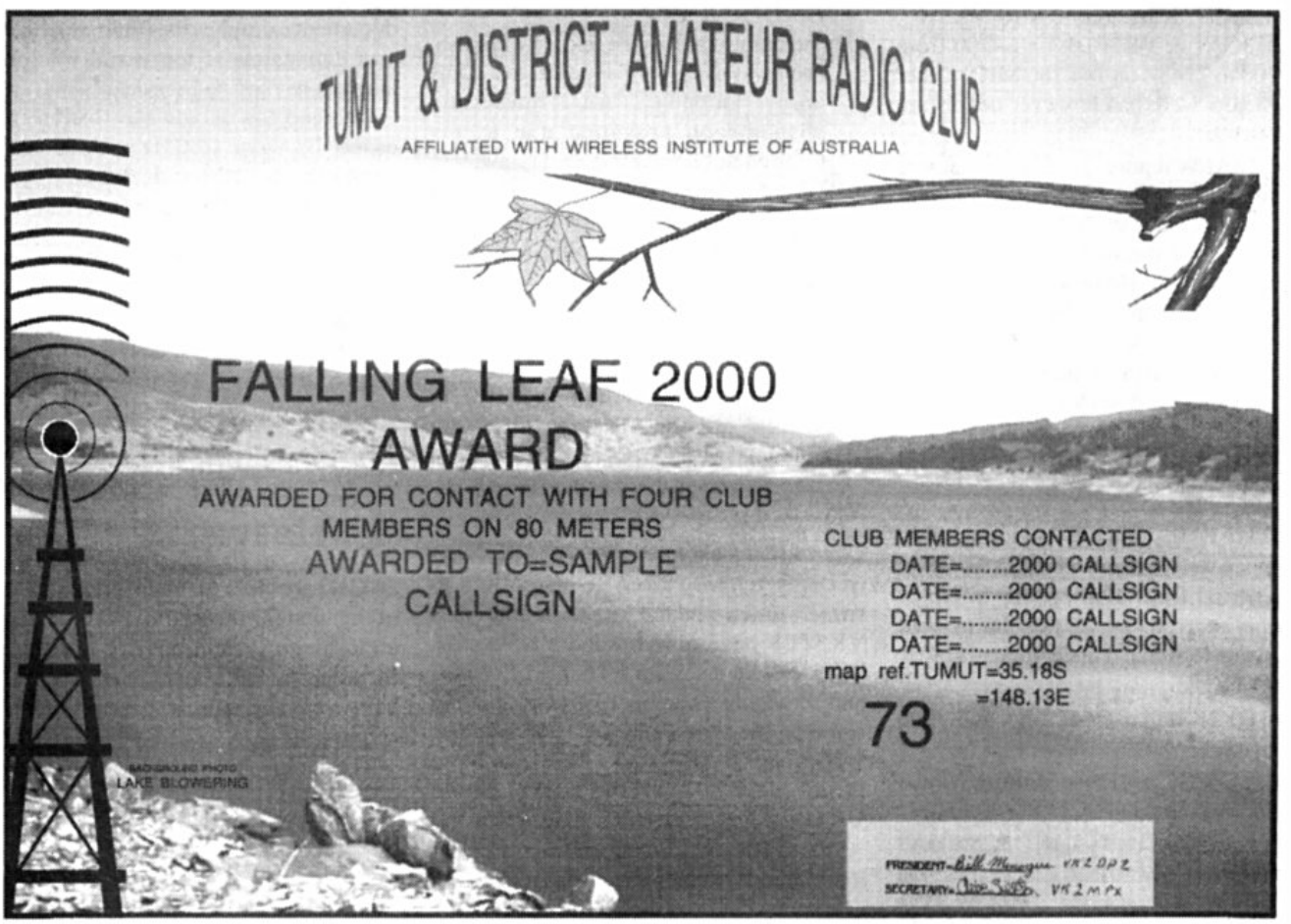
Thanks to all the contributors again this month. A fair amount of General info has been held over till next month. Hopefully we will see a bit more out of this equinox yet. And hopefully this Cycle is still on the UP! In the meantime will leave you with the following..

"One should always strive to make things as simple as possible.. but also be careful not to make things any simpler than that!"

Till next month

73's David VK5KK

ar



AWARDS

John Kelleher VK3DP
Federal Awards Officer
4 Brook Crescent, Box Hill South, Vic 3128 (03) 9889 8393

I must thank the many readers concerned for my medical situation. The process is not yet concluded, but I am confident of the final outcome. Physically, I will not be able to compile the column for the June issue, so please support me by sending information.

The Falling Leaf 2000 Award.

The following has been received from Bill Minogue VK2DPZ, with a request for urgent publication.

The Tumut & District Amateur Radio Club proposes to run an 80 Metre Net on Wednesday evenings commencing at 7 p.m. local time, on 3.575 Mhz +/- QRM as part of Tumut's "Festival of the Falling Leaf". An award, in colour, has been produced by the Club.

Conditions for the Award.

1 - Make contact with four members of the Tumut & District Amateur Radio Club on 80 metres during the year 2000, at any time of day !

2 - Second operators only eligible for the award, if in possession of a legal callsign.

3 - Please enclose a fee of A$5.00 to cover costs and postage.

4 - Enclose a signed list of 4 Club members contacted, and the date of contacts.

5 - Post all applications to :-

The Secretary, Tumut & District Amateur Radio Club, 14 Russell Street, Tumut NSW 2720

USA - The Dear Mabel Award.

For OM operators who wish to acknowledge the kind heart, willing hands, and patient understanding of their XYL. She may not always understand, but it's important to her OM so it's important to her. OM's may nominate their XYL for this award. Send her first and last name, plus your call sign. A beautiful 8 X 11 certificate plus a letter explaining just how she earned this award will be sent to the deserving XYL. Fee is US$4.00. Apply to :-

Florida Skip Magazine
P.O. Box 501
Miami Springs
FL 33266 USA.

Australia - *The VK1 Award.*

Contact VK1 stations. VK's need 20 all others need 10. All bands OK. Swl OK. GCR list and 5 Irc or A$3.00 to :-

Awards Manager WIA VK1 Division GPO Box 600 Canberra, ACT, 2601, Australia

Australia - *Wagga Wagga Award.*

Sponsored by Wagga ARC, and limited to 80 m contacts. Contact Club Station VK2WG (2 points) and other club member stations (1 point each) for a total of 10 points. Stations previously worked may be contacted after 7 days for another point. Silver upgrade for 40 points (free) Gold for 100 (A$1.00). GCR list and A$3.00 to :-

Awards Manager WARC, P.O. Box 294, Wagga Wagga, NSW, 2650

Where's DX ?

Alain, F2HE/FO0CLA left Marquesas on 21 March and is in Tahiti. He plans to operate from some IOTA's in French Polynesia before moving to the Austral Islands. His web site is at - http://www.ifrance.com/f2he.

QSL XF4LWY - Ron, AC7DX is not the QSL manager for this operation. Cards should be sent to XE1LWY, Enrique Garcia M., P.O. Box 75-481 , 07300 Mexico DF Mexico.

QSL FT5WI - Cards for Alain, who will be active from Crozet until November, will be handled by F6KDF, but his logs will be available only when he returns to France.

TX0DX - This Dxpedition went QRT some 24 hours earlier than expected, due to adverse weather conditions. The web site is at - http://www.n4gn.com/tx0dx/ for more details.

BHUTAN - The Kingdom of Bhutan has completed the long awaited Telecommunic- -ations Act of 2000 which authorises amateur radio. An International team has been invited by the Ministry of Communications for the initial introduction of amateur radio in Bhutan, May 1-12 2000.

Antarctica - Operator Dave is QRV as KC4AAA from Amundsen-Scott South Pole Station until November 2000. Look for him on 14243 Khz around 0500Z. QSL is via K1IED.

IRAN - Abdullah EP2FM, is active most days using SSB CW and RTTY usually around 0230- 0400Z. Also look for Masoud EP2ES, operating EP3PTT on Sundays and Mondays. He usually joins the LAZY-DX-NET on 14183 Khz from 1300Z on Sundays.

ZK1 North and South Cook Islands. Gerard PA3AXU has planned a new schedule as follows :-

South Cook Islands - July 3-7 from Raratonga

North Cook Islands - July 8-15 from Penrhyn

South Cook Islands - July 15-20 from Raratonga.

For more details, check his web site at - http://www.qsl.net/pa3axu/zk.htm

VK9WI - Willis Island. An expedition is expected in May 2000. Check the web site at -http://www.qsl.net/vk9wi

Mayotte - Christian 6W1QV is signing FH/TU5DX, for the next six months. Qsl F5OGL

Nepal - Nab, 9N1AC is usually found on 40 M cw around 2300Z. Qsl via KC3AJ.

VK9C - Cocos-Keeling Islands. Bert, PA3GIO will be active as VK9CQ from IOTA

OC-003 between August 26 and Sept 1. On SSB only.

VK9X - Christmas Island. The above operator will be active as VK9XV from IOTA

OC-002 September 2-13

Moldova QSL Bureau. Valery Metaxa reports that the new address for the QSL bureau is : ARM QSL Service Bureau, P.O. Box 2942, Kishinev, MD-2071, Moldova.

SRAL QSL bureau The Finnish Amateur Radio League's QSL-bureau has a new address. All QSLs to OF-OJ callsigns should be now send to: SRAL QSL Bureau P.o.box 73 Fin-11111 Riihimaki Finland The new address is working already. Please inform your QSL-bureau. 73's de Markus Ilvonen, OH3RM Office Secretary of SRAL.

73, and good hunting de John VK3DP

CONTESTS

Ian Godsil VK3DID,
57 Nepean Highway, Aspendale, 3195
Phone:0408-123-557
E-mail: <contests@wia.org.au>

Contest Calendar May - June 2000

May 6/7	ARI International DX Contest (CW/SSB/RTTY)	(Apr 99)
May 13/14	CQ-M International DX Contest (CW/SSB/SSTV)	(Apr 99)
May 13/14	Sangster Shield NZART (CW)	(Apr 99)
May 27/28	CQ WW WPX Contest (CW)	(Feb 99)
Jun 3/4	IARU Region 1 Field Day (CW)	
Jun 4	Portugal Day Contest (SSB)	
Jun 10	QRP Day Contest (CW)	(Apr 99)
Jun 10	Asia-Pacific Sprint (SSB)	(Jan 99)
Jun 10/11	ANARTS RTTY Contest	(May 00)
Jun 10/11	South America WW Contest (CW)	
Jun 17/18	VK Novice Contest (CW/Phone)	(May 00)
Jun 17/18	All Asia DX Contest (CW)	
Jun 24/25	ARRL Field Day	
Jun 24/25	Marconi Memorial Contest (CW)	(May 00)
Jul 1	Jack Files Memorial Contest (CW)	(May 00)
Jul 8	Jack Files Memorial Contest (Phone)	(May 00)
July 15	Pacific 160 Metres Contest (CW/Phone)	(May 00)

Thanks this month to VK2TRA VK2CTD VK4TI
This month is mostly about Results. However, I particularly draw your attention to the "NEW EXCHANGE SYSTEM" below. Please look at this and let me know your thoughts.

New Exchange System

The northern hemisphere contest managers are proposing a change to the system of contest exchanges to eliminate the use of the RS(T) section.

They believe that the majority of serious contesters now use computerized logging programs and that these automatically send 59(9) before the serial number. Therefore, what is to be gained by continuing to log those numbers when the important part is yet to come?

Locally, the Australasian Sprints in July have asked for only serial numbers for some years and some American contests have used only serial numbers for some time, so is it time that the rest of the fraternity joined in? Are there any thoughts on this, please? — especially (1) from regular users of automatic logging systems; (2) would the removal of three numbers cause serious problems?; (3) should WIA-sponsored contests become uniform with those in other parts of the world (if the proposal is adopted)?

73 and good contesting,
Ian Godsil VK3DID

NOVICE CONTEST 2000

from Robert Archer VK2TRA

Sat 17 June - Sun 18 June

0800z - 0800z

Object is to encourage amateur operation in VK, ZL and P2 and to promote contacts with Novice and Club stations. Only VK, ZL and P2 stations are eligible to compete and stations in the same call area may contact each other for contest credit.

Bands: Novice frequencies in the 10, 15 and 80 Metre bands. No cross-band operation permitted.

Categories: Single Operator, Club stations and SWL stations.

Modes: SSB and CW.

Call "CQ N" on CW, "CQ Novice Contest" on SSB and if you are involved with a club station then call "CQ Novice Contest Club Station" followed by your callsign.

Exchange RS(T) and serial number

commencing with 001 and incrementing by one for each subsequent contact. SWLs may log up to 10 sequential contacts made by a station and then log at least five other stations before logging the previous station again. The five stations so logged need be a minimum of one contact only.

Score: two points for contact with Full call stations; five points for contact with Novice / Combined stations and 10 points for Club stations.

SWLs score two points for Novice to Full and Full to Full, five points for Novice to Novice and 10 points for Club stations.

Logs headed "VK Novice Contest 2000" must show date, time in UTC, band, mode, station contacted, exchanges and total claimed score at the bottom of each page.

A **summary sheet** should show callsign, name, mailing address, category, section, number of valid contacts, claimed score, signed declaration showing signature of operator or responsible club officer for club stations.

Entrants may only submit one log per mode. Logs for entries where the operator uses more than one callsign whilst operating in the contest will not be accepted.

Mail logs to: Novice Contest Manager, Westlakes Amateur Radio Club Ltd., P.O. Box 3001, Teralba, NSW, 2284, by 16 July , 2000. Logs may also be e-mailed to: *<westlakes@hunterlink.net.au>*

Awards include the Clive Burns Memorial Trophy for the Novice with the highest CW score and the Keith Howard Trophy for the Novice with the highest SSB score. These trophies are held at the Wireless Institute of Australia Federal Office, with a plaque being sent to both winners.

Certificates will be awarded to the highest-scoring Novice in each call area and the highest-scoring station in each section. Certificates are at the discretion of the Contest Manager.

ANARTS WW RTTY Contest

from Colin Davies VK2CDT

0000z Sat 10 June - 2400z Sun 11 June

Not more than 30 hours of operating is permitted for Single Operator stations.

Non-operating periods can be taken at any time during the contest. Multi-operator stations may operate the entire contest period.

A summary of operating times is required with each single operator log.

Bands: 80 - 10 metres (no WARC)

Modes: All digital modes are permitted (RTTY, AMTOR, FEC, PKT, PACTOR).

NOTE : No satellite operation is permitted.

Categories:

(A) SINGLE OPERATOR (One transmitter)

(B) MULTI-OPERATOR (One transmitter)

(C) S.W.Ls

Exchange: to consist of RST, Time (UTC), and (CQ) Zone.

Scoring: For each band - Use the "Exchange Points Table (Marked 1994)" to obtain QSO Points for each QSO. Any contact with VK2SG earns double the table points for that QSO.

Count Countries/Multis worked (see definition).

Total all bands used to obtain

(1) Total QSO Points.

(2) Total Countries/Multis.

World stations calculate "VK Bonus" which is 100 points for each VK worked on 14MHz: 200 points for each VK worked on 21 MHz: 300 points for each VK worked on 28 MHz: 400 points for each VK worked on 7 MHz and 500 points for each VK worked on 3.5 MHz.

Claimed Score for World Stations is calculated by multiplying

(1) total QSO points by

(2) total Cntry/Multis, then that total by

(3) the number of continents worked during the contest.

(Note that each continent counts once only to a maximum of 6). To the total obtained *add* the "VK Bonus" to show Grand Total Claimed Score.

Example for World Station: 720 points from zone chart

(1) X 29 cntry/multis

(2) X 5 continents

(3) = 104,400 points, plus (+) 6 VK stations worked on 14MHz (that is 600 points) giving a grand total 0f 105,000 points.

Claimed score for Australian Stations (VK1-VK8) is calculated by multiplying

(1) total QSO points by

(2) total Cntry/Multis and then that total by

(3) the number of continents worked during the contest with a maximum of six as stated above. This calculation gives the **Grand Total Claimed Score.**

In all cases, a station may only be worked once per band, but may be worked on other bands for QSO points and multipliers.

Countries/Multis: Are counted as per ARRL DXCC list of countries, *except that* Australia (Areas 1- 8), Canada, Japan, and U.S.A. mainland do not count as separate countries. However, each call area VK1 - VK8, and each call area in Canada, Japan, and mainland U.S.A. ***does count as a separate multiplier.***

Contact with one's own country/multi does count for QSO points but ***does not count as a multiplier.*** (Remember that call areas VK1-VK8, and call areas in Canada, Japan, and U.S.A. mainland are multis).

Logs: Logs must show in this order:

1. Date
2. Time (UTC)
3. Callsign of station worked/heard.
4. Message information sent/received (RST/time/zone)
5. Points claimed.

Summary Report: Summary sheet must show : Callsign of station, name and address of operator, bands used (a separate log is required for each band), the points claimed for each band, the number of countries worked on each band, the number of continents worked and details of **VK Bonus** calculations for World Stations.

A summary of the calculations made to obtain the **Grand Total Claimed Score** as per the "Scoring" instruction will assist checking.

The general certification regarding compliance with Rules and the signatures and call-signs of operator(s) are also required. Multi-operator logs must contain signatures and callsign of each operator. Single-op logs must show summary of operating times. Dupe sheets will be appreciated for any band log over 75 QSOs.

Awards: Plaques will be awarded to first in World in each Classification. Certificates will be given to 1st to 5th

continued next page

continued form previous page

places in the World, and to 1st to 3rd places in each of six continents, and to 1st to 3rd in each country/-multiplier, in each Classification.. The judges decisions will be final and no correspondence will be entered into.

We reserve the right to list multiple awards on any Certificate and/or vary the numbers of awards given without notice. Logs become the property of ANARTS.

Closing Date: Logs must be received by the Contest Manager, ANARTS, P.O. Box 93, TOONGABBIE, NSW, 2146 , Australia, by 1 September 2000. Logs may be sent by e-mail before 25 August to: *<contests@wia.org.au>* and forwarded from there.

Jack Files Memorial Contest

CW Saturday 1st July 2000,

Phone Saturday 8th July 2000

0800z -1400z

from Trent VK4TI

This contest sponsored by the Wireless Institute Of Australia, Queensland Division, honours the late Jack Files, a long serving VK4 WIA Councillor.

Object is for Amateurs to work as many VK4 cities, towns and shires as possible (SWL to hear and log), to encourage portable/mobile activity from the less populated VK4 shires and towns, and to serve as a warm up for the Rememberance Day Contest.

Sections

a) Single operator home;

b) Club fixed;

c) Single operator mobile/portable;

d) Club mobile/portable;

e) Stations outside VK;

f) Short wave listeners;

Bands 160, 80, and 40m only. The contest is in six one hour periods for the purpose of duplicate contacts, i.e. 0800-0859, 0900-0959, 1000-1059 and so on. You may rework a station at any time provided they are not consecutive QSOs and the station has not already been worked during that one hour period. Contacts with stations in other contests are valid as are contacts with DX stations. Contacts on the 80m DX window are not permitted. Cross band contacts are not permitted. SWL entrants are to include the calls and serial numbers of both stations received, SWL entrants cannot log more than five consecutive from any one station in each one hour period.

Exchange: RS(T) followed by a serial number incremented by one for each QSO, continuing when changing bands. Multi transmitter stations should use a separate log sheet for each band. VK4 entrants send there two letter shire code after the serial number.

Score one point per QSO. Each VK4 shire/town code per band counts as a **multiplier,** as does each prefix per band. To stimulate portable/mobile activity, portable/mobile entrants can also claim one multiplier per band for each VK4 shire/town/city they operate from.

Final score equals total points multiplied by total multipliers.

In this contest only single operators are permitted to have a log keeper. Club stations can use multiple transmitters, provided there is only one station on each band at any one time.

Definitions: A mobile/portable station is one which uses a portable power source i.e.: car battery, solar or portable generator power, and a temporary antenna system.

Logs: attach a summary sheet showing name, postal address and callsign of the entrant, section entered, operator names and calls, station location, equipment used, points claimed, and a declaration that the rules and spirit of the contest were observed.

Send logs to: Jack Files Contest, WIAQ, GPO Box 638, Brisbane 4001.email *<awards@wiaq.powerup.com.au>* by Friday, 1' September, 2000, to be eligible.

N.B. *Contacts made during the contest are eligible for VK4 awards without the need for QSL confirmation. Email the manager for information on awards.*

VK4 City/Town/Shire Codes

AL Albert; **AC** Aramac; **AN** Arakun (R); **AT** Atherton; **BL** Baloone; **BA** Banana; **BC** Barcaldine; **BO** Barcoo; **BH** Bauhinnia; **BT** Beaudesert; **BY** Belyando; **BD** Bendemere; **BG** Biggendon; **BX** Blackall; **BV** Boonah; **BQ** Booringa; **BZ** Bouila; **BW** Bowen; **BN** Brisbane; **BS** Broadsound; **BP** Bulloo; **BU** Bundaberg; **BI** Bungil; **BK** Burdekin; **BR** Burke; **BE** Burnett; **CB** Caboolture; **CS** Cairns; **CL** Calliope; **CA** Caloundra; **CM** Cambooya; **CD** Cardwell; **CP** Carpentaria; **CT** Charters Towers; **CH** Chinchilla; **CF** Clifton; **CY** Cloncurry; **CK** Cook; **CN** Crows Nest; **CR** Croyden; **DY** Dalby; **DL** Dalrymple; **DI** Diamantina; **DG** Douglas; **DU** Duaringa; **EA** Eacham; **ED** Eidsvold; **EM** Emerald; **EK** Esk; **ET** Etheridge; **FZ** Fitzroy; **FL** Flinders; **GT** Gatton; **GH** Gayndah; **GD** Gladstone; **GC** Gold Coast; **GI** Goondiwindi; **HT** Herberton; **HB** Hervey Bay; **HK** Hinchinbrook; **JE** Jericho; **JO** Johnstone; **JY** Jondaryan; **KY** Kilcoy; **KK** Kilkivan; **KG** Kingaroy; **KO** Kolan; **LA** Laidley; **LV** Livingstone; **LC** Logan; **LO** Longreach; **MC** Mackay; **MA** Mareeba; **MO** Maroochy; **MB** Maryborough; **MK** McKinlay; **ML** Milmerran; **MN** Mirani; **MV** Miriam Vale; **MT** Monto; **MZ** Mornington (R); **MI** Mt Isa; **MM** Mt Morgan; **MU** Mundubbera; **MY** Murgon; **MX** Murilla; **MH** Murweh; **NN** Nanango; **NE** Nebo; **NO** Noosa; **PO** Paroo; **PD** Peak Downs; **PY** Perry; **PR** Pine Rivers; **PT** Pittsworth; **QL** Quilpie; **RC** Redcliffe; **RD** Redland; **RI** Richmond; **RH** Rockhampton; **RM** Roma; **RO** Rosalie; **SA** Sarina; **ST** Stanthorpe; **TB** Tambo; **TA** Tara; **TM** Taroom; **TE** Torres; **TV** Townsville; **WG** Waggamba; **WO** Wambo; **WR** Warroo; **WA** Warick; **WH** Whitsunday; **WI** Winton; **WD** Wondai; **WC** Woocoo.

(R) = restricted area for radio transmission (Shire entry permit required).

Pacific 160m Contest 2000

Saturday, 15 July, 2000

0700 - 2300 UTC

Object: for P2, ZL and VK stations to make as many contacts as possible on 160 metres. DX stations are encouraged to participate, but may only work P2, ZL or VK.

Categories: Single Operator; SWL

Modes: CW; SSB; MIXED

Frequencies: CW:1828 - 1840 kHz. SSB:1843 - 1875 kHz

(Note: Guard band 1849 - 1843 kHz. Contacts not permitted)

Exchange: RS(T) plus serial number beginning at 001.

Score: For P2, ZL, VK –

One point for QSO with own call area;

two points for other call areas in ZL or VK;

three points for Pacific Islands (ZK1, VK9)

For Pacific Islands –

one point for QSO with own call area;
three points for P2, ZL, VK;
five points for QSOs outside P2, ZL, VK.
For stations outside P2, ZL, VK or Pacific Islands –
five points per QSO.

Multiplier: For P2, ZL, VK – total number of VK, ZL and P2 call areas worked, plus OTHER DXCC countries. For stations outside P2, ZL, VK –total number of P2, ZL and VK call areas worked.

Final Score: Total QSO points times total multipliers.

Certificates: to top scorers in each mode, call area of ZL and VK and in each DXCC country.

Logs: Please show full details of name, address; station; category; mode; time UTC; exchange. Include Summary Sheet and signed Declaration.

Send Logs:

1. By mail to –
   Ian Godsil VK3DID,
   57 Nepean Highway, Aspendale, 3195, Australia
2. By e-mail to <*contests@wia.org.au*> by 12 August, 2000

Marconi Memorial Hf Contest

24 - 25 June

1400z Sat - 1400z Sun

Object: To work as many stations as possible world-wide.

Bands: 160 - 10m (no WARC). 10 minutes rule applies.

Mode: CW.

Categories: Single Operator low power (max 100w o/p); QRP (max 5 w o/p). Multi-operator.

Exchange: RST plus serial number starting at 001.

Score: One point for each verifiable QSO.

Multiplier: Each DXCC country worked may be counted as one multiplier. This multiplier can be counted once per band.

Final Score: Total QSO points times total multipliers.

Logs: Separate logs for each band. Include Summary Sheet showing all details and signed declaration.

Send Logs by disk in ASCII format, or by mail to: ARI sez. Di Fano, PO Box 35, I-61032 Fano (PS), Italy, by 25 July.

Logs may be sent by e-mail to: <*ik6ptj@qsl.net*>

ar

BERU 2000

Comments from Russ Coleston VK4XA

The Commonwealth contest, known as the BERU, was held over a 24 hours period during the weekend of 11 - 12 March.

This "CW ONLY" contest has retained its popularity for 63 years, despite declining support from Australian stations. This year, Canadian stations were particularly active. The only areas not heard were VE8 and VE0. UK stations as usual, were working hard for overseas contacts, as no local call areas, apart from the "HQ" station GB5GC, are available to them.

In Australia, the NSW Division of the WIA used the special event call, AX2OOO, which was activated by VK2AYD, as a "HQ" station. The other Australian "HQ" station was VK4WIA, operated by VK4XA. Canada operated several "HQ RAC" stations.

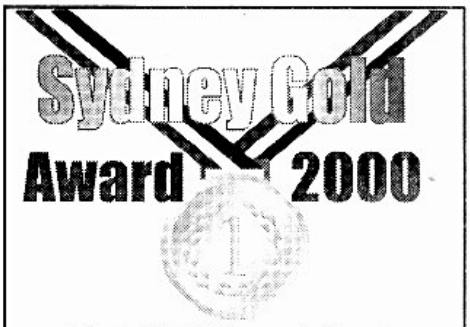
Propagation on the lower frequency bands, 40 and 80 metres, was below normal. Only VK and ZL stations were heard on 80 metres, whilst on 40 metres only a few UK and VE stations were heard, apart from VK and ZL. 20 metres provided a continuity of contacts throughout the 24-hour period. A large number of UK and VE's, plus local call areas and DX stations, 9J2, VP9, ZB, P2, 5B, 9G, ZF and 9H, were all good signals and easily worked. 15 metres remained open most of the time also, again with good DX stations as for 20 metres. 10 metres was swamped by Canadian stations, plus several ZL's, a few VK's and DX. ZF, V# and 5B4, were easily worked.

Overall an interesting and friendly contest where you meet old friends perhaps once a year.

The top contest stations dominated, and serial numbers around 800 were heard with 90 watts and suburban backyard antennas, VK4XA had 333 QSOs for the VK4WIA HQ station. Greater participation by VK's in next years' contest would be welcomed.

73 de Russ Coleston VK4XA

ar



The VKDX Association is sponsoring the

Sydney Gold — the Gathering of the Nations Award

to commemorate the Sydney Olympic and Paralympic Games

The award aims to encourage Sydney, Australian, and DX stations to contact Radio Amateurs in the Sydney area, and applies to contacts made between 1 July and 31 December 2000.

For the purposes of the award, "Sydney" is defined as New South Wales postcode areas 2000 to 2249, 2560 to 2570, and 2745 to 2770.

The award will be issued in three levels:

- **GOLD** for contacts on three or more bands
- **SILVER** for contacts on two bands
- **BRONZE** for contacts on one band.

Australian and New Zealand stations require 30 contacts to obtain the award; stations in other countries require 15 contacts. Repeat contacts in a 24-hour period are not counted.

To encourage Sydney Limited and Novice grade licencees to obtain the award, contacts may be made via repeaters, and mobile contacts may be included using the mobile operator's home postcode.

Applications for the award and proof of contacts follow General Certification Rules.

The application should show callsign of the station worked; band; mode; signal report and postcode received; UTC date and time.

Two licenced Amateurs must certify that the details of the log extract are correct.

To claim the award, send your log details, and $10 Australian to: —

The Secretary,
VKDX Association,
PO Box 299, Ryde NSW 1680,
Australia

For further details, please write to the address above, or phone John Saunder VK2DEJ on (02) 9809-5686.

(Please note that this award should not be confused with the "Sydney Award" sponsored by the WIA NSW Division.)

VHF-UHF Field Day Results
— Spring 1999, Summer 2000

Both went well. The 6 hour section single operator was well supported in the Summer Field Day (FD). Few single operators work for 24 hours. Propagation for the Spring FD was ordinary. CW is just about non existant. Knowing your grid square helps both you and your contacts. Good scores get better if you can work more squares from more squares. In the Spring FD VK6KZ, VK5AIM, VK5UE and VK3KAI had 4. In the Summer FD VK5KAI had 5!

Working on more bands helps a lot. The 12, 9, 6and 3cm bands need a bit of prearranging but get lots of points.

Scoring raised a few questions particularly for 6m contacts. Most logs were well presented, but in both FD some logs had to be scored from scratch. The scoring tables requested in the rule were not always submitted. These tables help a lot in vetting the logs.

In each FD one or more call areas were not represented. I was wondering if the Spring FD were moved to the first weekend in November if that would allow more VK4 participation.

Congratulations to Geelong ARC for winning the club section in each FD. Peter, VK3KAI, gets special mention for getting into 5 squares and Charlie VK3KLO did well in his first VHF FD.

Thank you all for your participation, hear you in November 2000.

John Martin VK3KWA
Contest Manager.

SPRING VHF-UHF FIELD DAY 1999: RESULTS

Contest Manager: John Martin VK3KWA

Numbers in brackets show the number of locator squares worked on each band.

Call	Name	Locator(s)	6 m	2 m	70 cm	23 cm	12 cm	6 cm	3 cm	TOTAL
Section A:		**Single Operator, 24 Hours**								
VK5AR	A. Raftery	PF96	22 (1)	396 (9)	430 (6)	-	-	-	-	848
VK5UE	C. Low	PF85.86,95,96	91 (7)	273 (7)	465 (7)	-	-	-	-	829
VK5AIM	S. Mahony	PF85.86,95,96	91 (7)	273 (7)	465 (7)	-	-	-	-	829
Section B:		**Single Operator, 6 Hours**								
VK6KZ	W. Howse	OF77,78,87,88	73 (5)	324 (7)	520 (7)	592 (5)	660 (5)	530 (4)	650 (5)	3349
VK3KAI	P. Freeman	QF21,22,31,32	66 (5)	294 (7)	485 (7)	520 (5)	550 (4)	-	-	1555
VK3WRE	R. Edgar	QF31	59 (4)	354 (8)	455 (6)	472 (4)	550 (4)	-	-	1477
VK3JED	T. Langdon	QF22	29 (1)	213 (4)	260 (3)	368 (3)	-	-	-	870
VK3CAT	T. Middleditch	QF22	42 (2)	270 (6)	315 (4)	-	-	-	-	627
VK3YE	P. Parker	QF22	39 (2)	210 (3)	230 (2)	-	-	-	-	479
VK7JG	J. Gelston	QE39	47 (3)	201 (6)	112 (2)	-	-	-	-	360
Section C:		**Multi Operator, 24 Hours**								
VK3ATL	GARC (1)	QF21	33 (2)	672 (17)	860 (13)	624 (5)	-	-	-	2189
VK5SR	SERG (2)	QF02	34 (2)	351 (8)	310 (4)	272 (2)	-	-	-	967
VK3AEF	(3)	QF03	32 (2)	474 (10)	425 (6)	-	-	-	-	931
VK3EM	(4)	QF23	58 (3)	336 (7)	345 (4)	-	-	-	-	739
VK2IBT	(5)	QF56	42 (2)	243 (3)	220 (2)	-	-	-	-	505
VK2FSC	FSC ARC (6)	QF43	-	363 (9)	-	-	-	-	-	363
Section D:		**Home Station, 24 Hours**								
VK3BDL	M. Goode	QF22	39 (2)	585 (15)	615 (9)	408 (3)	-	-	-	1647
VK3BJM	B. Miller	QF22	63 (3)	501 (10)	535 (6)	432 (3)	-	-	-	1531
VK2TWR	R. Collman	QF43	-	390 (11)	590 (9)	147 (1)	-	-	-	1127
VK3GK	L. Moyle	QF22	39 (2)	312 (7)	245 (2)	328 (2)	-	-	-	924
VK3CY	D. Clarke	QF13	-	498 (12)	375 (5)	-	-	-	-	873
VK3AL	A. Elliott	QF22	-	99 (2)	180 (2)	368 (3)	-	-	-	647
VK3CAT	T. Middleditch	QF22	45 (2)	285 (6)	270 (3)	-	-	-	-	600
VK5LP	E. Jamieson	PF94	-	165 (4)	165 (2)	-	-	-	-	330
VK3DID	I. Godsil	QF22	27 (1)	84 (1)	-	-	-	-	-	111

(1) Geelong Amateur Radio Club: C. Gnaccarini VK3BRZ, L. Sim VK3ZLS, D. Learmonth VK3XLD, A. Gnaccarini (SWL).

(2) South East Radio Group: C. Hutchesson VK5DK, T. Niven VK5NC, T. Aubrey VK5EE.

(3) J. Bywaters VK3AEF, W. Day VK3SWD.

(4) L. Enriquez VK3EM, G. Sneddon VK3YY, C. Goetze VK3TXA.
(5) K. Standen VK2IBT, N. Bowden VK2HT, W. Thompson VK2MGE.
(6) Far South Coast ARC: P. Thomas VK2WPT, K. Bell VK2US, G. McDonald VK2FGM, C. Bell (SWL).

SUMMER VHF-UHF FIELD DAY 2000: RESULTS

Contest manager: John Martin VK3KWA

Numbers in brackets show the number of locator squares worked on each band.

Call	Name	Locator(s)	6 m	2 m	70 cm	23 cm	12 cm	9 cm	6 cm	3 cm	TOTAL
Section A:		**Single Operator, 24 Hours**									
VK3WRE	R. Edgar	QF31	-	822 (17)	990 (12)	984 (7)	670 (5)	220 (1)	330 (2)	-	4016
VK2TWR	R. Collman	QF44	112 (7)	390 (7)	585 (7)	504 (4)	-		-	-	1591
VK3EK	R. Ashlin	QF42	82 (6)	507 (11)	510 (7)	352 (3)	-	-	-	-	1451
VK5AR	A. Raftery	PF97	Check log								
Section B:		**Single Operator, 6 Hours**									
VK3KAI	P. Freeman	QF21,22,30,31,3221	(1)372 (5)		590 (5)	816 (4)	650 (1)	-	-	2449	
VK3XPD	A. Devlin	QF21	-	336 (8)	430 (6)	568 (5)	210 (1)	330 (2)	330 (2)	210 (1)	2414
VK3KAB	D. Williams	QF21	-	336 (8)	435 (6)	560 (5)	210 (1)	330 (2)	330 (2)	210 (1)	2411
VK3AFW	R. Cook	QF22	80 (5)	567 (13)	480 (6)	-	-	-	-	-	1127
VK4OE	D. Friend	QG62	-	156 (3)	250 (3)	344 (3)	210 (1)	-	-	-	960
VK3YE	P. Parker	QF22	34 (1)	300 (4)	365 (3)	-	-	-	-	-	699
VK2KU	G. Fletcher	QF56	-	297 (7)	300 (4)	-	-	-	-	-	597
VK4EV	R. Everingham	QG62	-	186 (4)	176 (1)	-	-	-	-	-	362
VK5UE	C. Low	PF95	36 (2)	120 (2)	190 (2)	-	-	-	-	-	346
VK5AIM	S. Mahony	PF95	36 (2)	120 (2)	190 (2)	-	-	-	-	-	346
VK4LP	J. Lemura	QG62	-	186 (4)	115 (1)	-	-	-	-	-	301
VK2YJS	J. Sortland	QF56	-	102 (2)	-	-	-	-	-	-	102
Section C:		**Multi Operator, 24 Hours**									
VK3ATL	GARC (1)	QF22	214 (14)	843 (17)	1120 (14)	1128 (8)	-	-	210 (1)	210 (1)	3725
VK5SR	SERG (2)	QF02	-	327 (8)	405 (6)	560 (5)	-	330 (2)	580 (4)	550 (4)	2752
VK5ARC	SCARC (3)	PF94	61 (3)	516 (9)	490 (6)	-	-	-	-	-	1067
Section D:		**Home Station, 24 Hours**									
VK3KLO	C. Kahwagi	QF22	99 (5)	609 (11)	900 (10)	784 (5)	-	-	-	-	2392
VK3BJM	B. Miller	QF22	82 (4)	480 (9)	625 (7)	720 (5)	-	-	-	-	1917
VK3BDL	M. Goode	QF22	113 (7)	510 (10)	660 (8)	600 (4)	-	-	-	-	1883
VK3GK	L. Moyle	QF22	39 (1)	324 (6)	400 (4)	472 (3)	-	-	-	-	1235
VK3CAT	T. Middleditch	QF22	89 (5)	390 (7)	370 (3)	-	-	-	-	-	849
VK2CZ	D. Burger	QF56	-	165 (3)	250 (3)	184 (1)	-	-	-	-	599
VK3CY	D. Clarke	QF13	-	180 (3)	230 (2)	176 (1)	-	-	-	-	586

(1) Geelong Amateur Radio Club: M. Trickett VK3ASQ, L. Sim VK3ZLS, G. Noss VK3HQ, C. Gnaccarini VK3BRZ, J. Barrand VK3DFL, D. Learmonth VK3XLD, C. Leone VK3BCL, P. Hapgood VK3ATI, A. Gnaccarini (SWL).
(2) South East Radio Group: T. Niven VK5NC, C. Hutchesson VK5DK, T. Aubrey VK5EE.
(3) South Coast ARC: S. Callow VK5PCY, B. Bates VK5KB
(4) J. S. Bates (SWL).

RESULTS OF VK/ZL OCEANIA CONTEST 1999

Serious followers of the VK contest scene know that each October sees the staging of the VK/ZL/OCEANIA Contest.

While it may not be the best-patronized of Australian contests, it is nevertheless our premier world-wide event – in fact, one of the few Australian contests that invites DX participation.

For several years the manager has been Neil Penfold VK6NE and I take this opportunity to say a sincere "thank you" to him for a lot of work in receiving and checking logs and compiling results.

The **Frank Hine VK2QL Memorial Trophy** is presented each year to the CW entrant with the highest score. This year's winner is that well-known Australian contestant **John VK4EMM.** John is no stranger to high scores in contests and this year he notched up 3815735 points. Congratulations John!

However, we should not overlook another equally well-known VK contestant in **Martin**

John Loftus VK4EMM

continued next page

continued from previous page

VK5GN. He, too, has a consistent history of high scoring over many years and this year won the SSB section. The only trouble is that the rules don't make any recognition of a special award for that feat!

The Contest Manager sent some statistics on the 1999 event , viz VK logs received were only 12 for Phone and nine for CW. As he says, "hardly a popular contest!"His feeling is that perhaps the time has come to discontinue the contest. I feel that that would be a shame, as I know that many operators "up there" quite enjoy working us VKs and ZLs. Also, being optimistic, I hope that more of you will join in our contests next year!!!

Because of limitations on space, the results here are for VK and ZL only. However, full results are available on the Internet at: *http://www.sk3bg.se/contest/* or from me.

Congratulations to all those who took part and thank you. See you again.

Ian Godsil VK3DID Federal
Contests Co-ordinator.

VK/ZL/OCEANIA RESULTS 1999

OCEANIA

AUSTRALIA

PHONE

Call	*80*	*40*	*20*	*15*	*10*	*Total*
VK2APK				557968		557968
VK2FHN			5451	238050	20475	521268
VK3AJJ	29110	3780	214590	242048	51600	2204264
VK3ER		3000	115720	75044	10224	621452
VK3IO				No details supplied		383350
VK4UC			52852	317900	45440	2217330
VK4EMM		5950	26535	195674	491895	2081489
VK4PJ			156	1800		3145
VK5GN		5610	63375	479382	302364	2575126
VK5AM				983252		983252
VK7JAB				280		280
VK8AV		45	288	27510	48	39296

CW

Call	80	40	20	15	10	Total
VK2AYD	250	4200	49226	195566	144096	1329408
VK2APK	560	90090	109125	217932	91161	214800
VK2QF			19118	73612	63825	464490
VK4EMM	90	352800	124215	163374	284928	3815735
VK4TT			28321	37488	7680	218040
VK5GN			202872			202872
VK5AGX			17380			17380
VK6ZH				330000	218400	429300
VK8AV					237600	237600

Check Log — VK3AMD Thank you.

NEW ZEALAND

CW

	80	*40*	*20*	*15*	*10*	*Total*
ZL2AGY		263245	64155	99120	1511074	2401165
ZL2BR		12100	87862	223368	56400	1321439
ZL2AIH	40		5063	20768	2835	79032
ZL6QH	16500	687750	82812	462146	363312	6868476

PHONE

	80	*40*	*20*	*15*	*10*	*Total*
ZM1IM			256	24738	507	39162
ZL2AZ		180	1716	15	88032	140940
ZL3TX	10		120	12		656
ZL6QH	1200	31825	220854	452978	497724	18251912

ar

New column

DX NOTES

Ross Christie, VK3WAC
19 Browns Road, Montrose 3765, Vic.
Email Vk3wac@aol.com

DX returns to AR

It has been over a year since the last 'How's DX?' column by Stephen Pall VK2PS in *Amateur Radio*. The column was a great guide to current happenings on the HF bands and for what was planned for the future. I could not imagine a magazine dedicated to Amateur Radio that did not contain a DX column, so I put my hand up to take up where Stephen left off. Stephen will be a difficult act to follow as this is my first attempt at writing for a magazine.

DX chasing means many things to many people. There are the dedicated DX chasers who have magnificent multi-rig stations with huge arrays of yagi beams, and then the QRP operator who likes to try his hand among the big guns (I have a lot of respect for these guys!). I operate a rather modest station comprising an IC746 running 100Watts to a full size G5RV via an ATU and a 20/15m dipole. I mainly operate on 30m and above with the occasional visit to 40m. My DX outlook is restricted; living in the lee of a very tall hill restricts any signals to/from my South to South-East, e.g. South America and Antarctica. Still, I manage to work my fair share from elsewhere.

Can YOU help?

Amateur Radio magazine belongs to the members of the WIA. It is also read by some who are not WIA members, but no matter who reads it they read it for the information pertaining to our hobby. Similarly, this column is by and for members of our hobby, and for the column to be relevant, it will need up to date and accurate information. I have contacted a few overseas groups and DX columnists for pointers to current and accurate information. But AR is an Australian magazine and we should report DX from a VK point of view. To do this I will need your help. Any details or information you can provide on current or proposed DX or upcoming DXpeditions will be appreciated. Also, if you have any ideas what to include in the column please send them to me.

DX News

- JAN MAYEN, JW. Per, LA7DFA, is QRV for 6 to 12 months as JX7DFA. Activity will be on 160 to 2 metres, using CW, SSB, SSTV and digital modes, including PSK31. QSL via his home call.
- ANGOLA, D2. Fernando, EA4BB, will be back in Angola for a year as D2BB. He will be taking his trusty Drake TR7A and a 6 el yagi and some wire to make some dipoles. QSL route is via W3HNK.
- CHINA, BY. Look for BX5AA on 24923 kHz around 1550z and also BX4AF on 21089 kHz using RTTY at 1500z.
- JAPAN, JA. One for the IOTA operators. Masa, JA6GXK, will be active from Danjo Archipelago, IOTA AS-056, until July 11. He will be active at various times, mainly operating during his spare time. QSL via his home call.
- LAOS, XW. Hiroo, JA2EZD, is QRV as XW2A until early May on all bands and modes. QSL via his home call.
- MAYOTTE, FH. Christian, FH/TU5AX, is looking for QSO's on 6 metres. He says he will be listening on 50.110MHz beginning around 1450z.He can sometimes be caught on 14260 kHz after 0330z and on 10 metres between 28470 and 28500 kHz after 1200z.
- MARTINIQUE, FM. Jacques, F6BUM, will be active as FM/F6BUM from April 27 till May 4. QSL via home call.
- REUNION ISLAND, FR5. Mattheiu, F5PED, has been active as FR5DC since November. He is very active on 80-10 metres CW. Last reports found him on 24898 kHz at around 1520z.
- PALAU, TT8. Jean Luc, F5BAR, will be active as TT8JLB until July. His activity has been mainly CW on 15, 12 and 10 metres. Check 10 and 15 metres after 2200z, sometimes after 1630z. QSL via F5BAR.
- WILLIS ISLAND, VK9WI. David, VK4ZEK, reports that the Dept of Meteorology has allowed an additional operator, P.J Garden, VK4APG, to land on the island, this brings the number of operators to 5. There has also been a change of the Dxpeditions 6m-beacon frequency due to crystal frequency availability. The beacon will now operate on 50.515 MHz. Also, operation on 160, 80 and 40 should now be possible, thanks due to George Taft, W8UVZ, for sending a 'Battle Creek Special' antenna.
- BHUTAN, A5. Bhutan has apparently changed their telecommunications laws to allow amateur radio again. An international team consisting of 9V1YC, JA1IG, JA3USA, JF1IST, K3VN, K4UEE, N0MJ, N1DJ, OH2BU, ON4WW, RA3AUU, UA3AB, W0GJ and W3WL have been invited by the Bhutani Telecommunications Ministry to re-introduce amateur radio operation from 1 – 12 May. Three CW, three SSB and an RTTY station will operate 24 hours a day for the duration.
- A multi-national team including Marq, CT1BWW, Mario, DJ0MW, and Yuki, JA9QX, will be active from Alcoutim Castle as CT6C on May 1st for 24 hours. Then, on May 3rd and 4th they expect to be active from Castro Marim Castle as CS5M. To wrap things up, they will finish their tour at the Lighthouse of Vila Real Sto. Antonio on May 5th and 6th as CQ7Q. This is an

continued next page

continued from previous page

important event as this will be the first amateur radio operation from this important lighthouse in Southern Portugal, near the Spanish border. QSL all via the bureau. (Courtesy of Bernie, W3US, Dailydx.)

- OMAN, A4. Tony Selmes, A45ZN, will be back in Muscat, Oman. Tony is returning for three months starting April 19th. His favourite mode is CW.
- ASCENSION ISLAND, ZD8. Jim, N6TJ, is expecting to be back on Ascension Island as ZD8Z beginning May 25th. Jim will put in an effort in the CQ WPX CW Contest and will remain on the island until June 3rd. QSL via VE3HO.

This months details have been made possible with information provided by Tedd, KB8NW, the OPDX Bulletin, The 599Rpt, DXNL, QRZ DX, 425 DX News.

DX Cluster activity and recent loggings.

I intend to setup a DX cluster monitoring system in the shack so as to get a feel for what is happening on the bands. Jack, VK3WWW and Tony, VK3TI demonstrated one at a recent EMDRC meeting in Melbourne. It was an impressive display of amateur technology and one that should be very useful to DX'ers. It should provide some good information on who is currently active and from where. Some recent loggings on the DX clusters revealed the following interesting stations.

40m 7X2RO, 9E1C, CE0ZR, FR5FD, FY5KE, TI4CF, TT8JA, V31JP.

30m 3B8MM, FM/F5JOT, J79KS, S79MX, TZ/DF8AN, V31JZ, ZF2LC.

20m 4W/W3UR, FO0HWU, VK0MM.

17m E4/G3WQU, TX0DX, VP6BR, XW2A.

15m 4W6GH, ZK1HCU.

12m 3B8MM, A35MQ, CE0ZR, FR5FD, PA3GIO/HC8, YS1RR.

10m 4W6EB, 9E1C, 9G5MD, 9U5D, H44PT, TA4/DL7CM.

SV2ASP/A Monk Apollo has been active on RTTY from Mount Athos recently on 14086 after 2100z.

ZC4RAF UK Sovereign Bases on Cyprus, Colin has been active on 14269 from 1815 –2100z. QSL via 5B4YX.

Round up

Most of the above information has been gleaned from Internet DX sources and has been edited down to what I believe will be interesting to VK amateurs. Hopefully you will find the information useful and interesting. I will try and source some information on some upcoming DXpeditions for next month's column. The northern hemisphere is heading into their Spring and Summer seasons so perhaps we will hear of some interesting operating from there. Remember; if you hear of some interesting news regarding HF operating please drop me a line so we can all share in it. Best DX and 73.

Sources

Thanks and recognition are due to the following people and organisations. Tedd KB8NW, Tomas NW7US, the OPDX Bulletin, The 599Rpt, DXNL, QRZ DX, 425 DX News and Bernie, W3US's Dailydx.

ar

POUNDING BRASS

S.P. Smith VK2SPS
9 Peak Street Bateau Bay NSW 2261
(H) 02 4334 7743

Rhythmic Sounds - not Dots and Dashes

There is no easy way to learn morse, it is a matter of hard and constant practice, practice and more practice.

Morse code as heard over the air consists of rhythmic sounds denoting letters, numbers and punctuation and has nothing to do with dots and dashes which is sometimes recommended to us through other teachings.

If we were all musically inclined which by the way I am not, we could use musical notation and set the dots and dashes down as "Quavers" and dotted "Crochets" with the appropriate rests between them.

I will now explain to you how to set about learning morse, but firstly to consider briefly where other systems fail.

Letters of the alphabet are denoted by various combinations of a short sound, commonly referred to as a "Dot (.)" and a sound three times the length of a dot but referred to as a "Dash (-)".

Between each dot and dash there is a space equal to a dot; between each dot and dash combination representing a letter of the alphabet, there is a space equal to three dots and between each word there is a space equal to five dots.

The letter "N" for example is represented by a long sound followed by an interval of a dot and then by a short sound. This can easily be hummed or whistled, which represents the letter "N" as heard by another operator over the airways. Unfortunately it is usually called Dash-Dot and written down as (- .)

The unfortunate effect of this dash-dot inscription may perhaps be realised when it is said that an expert operator can easily read at speed, a morse transmission that is either hummed or whistled to him. On the other hand if he sees a message written down as a series of "Dots and Dashes" he will usually only be able to read it slowly and in a halting manner. Similarly if the sender, instead of humming the sound, actually speaks the words dot and dash when sending the various letters, the receiving operator will be at a complete loss.

A skilled operator would have no difficulty in glancing at a page of a book and humming it out rapidly in morse code, would fail miserably if asked to speak it out by using the words dot and dash, or to write it down using (.) and (-). It can often be said that the skilled operator trained to read by sound is usually not much of a hand at deciphering a morse message sent by a signaling lamp or flag.

In conclusion having discovered at some length the incorrect way to learn morse and seen why it is incorrect, we are now in a proper position to consider the correct way, and what is more important is to understand why it is the correct way. The 2nd & conclusive part of this article inadvertently appeared in April's Issue.

Until then best of wishes,

VK2SPS Stephen P. Smith 73

Ref: This article was taken from Wireless Word. November Issue 1939 pgs 13,14 and 15.

ar

IONOSPHERIC UPDATE

Predictions show that the solar cycle is now expected to reach its maximum around December this year. While this cycle is not expected to match the previous two, volatility in conditions indicates that similar radio opportunities are possible. The trick is to be there when it happens as picking the time will not be as easy. It's one of those times when science becomes art.

To quote the Ionospheric Prediction Service bulletin: *At this time of the solar cycle, space weather conditions are frequently determined by short timescale events, not able to be forecast a week in advance.*

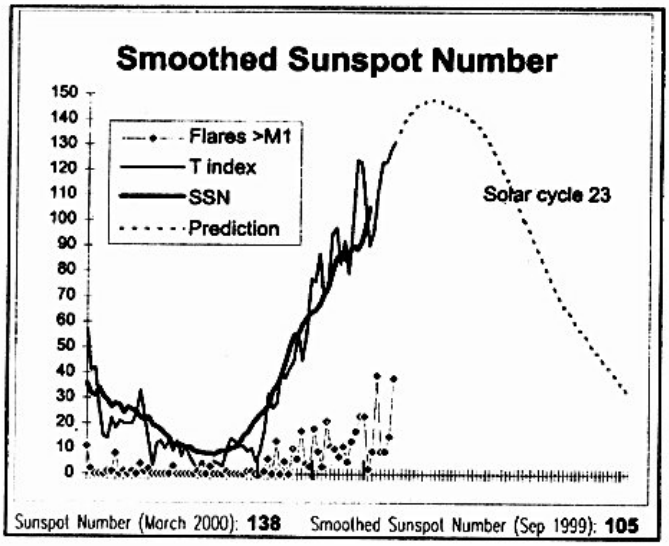
A graph comparing the last three solar cycles is again included this quarter. It includes about half a year's more data. The graph gives more shape to the current solar cycle making it clear that this cycle will not be like the previous two: they were exceptional.

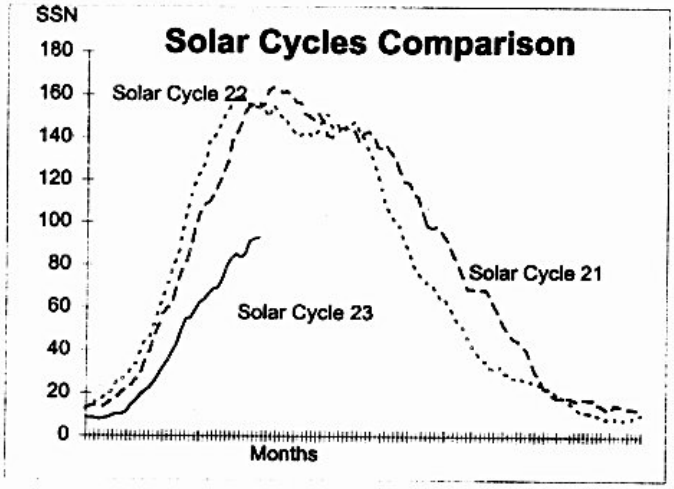
Solar activity is picking up. A flare in early April was the largest for over a decade. A subsequent severe geomagnetic storm starting on 6 April was behind the poor propagation at the time. The Canberra A index rose to 51 and 37 over the consecutive days. The K indices (which are averages over three hours) shows the severe activity was uniform for about 24 hours spread equally between April 6 and 7. For us that would be on April 7 as all times in space weather reports use UTC. It was an early warning of the effects of higher solar activity for some people who are affected by these things: an electricity grid in Scandinavia blacked out. More on this next quarter when the results are in.

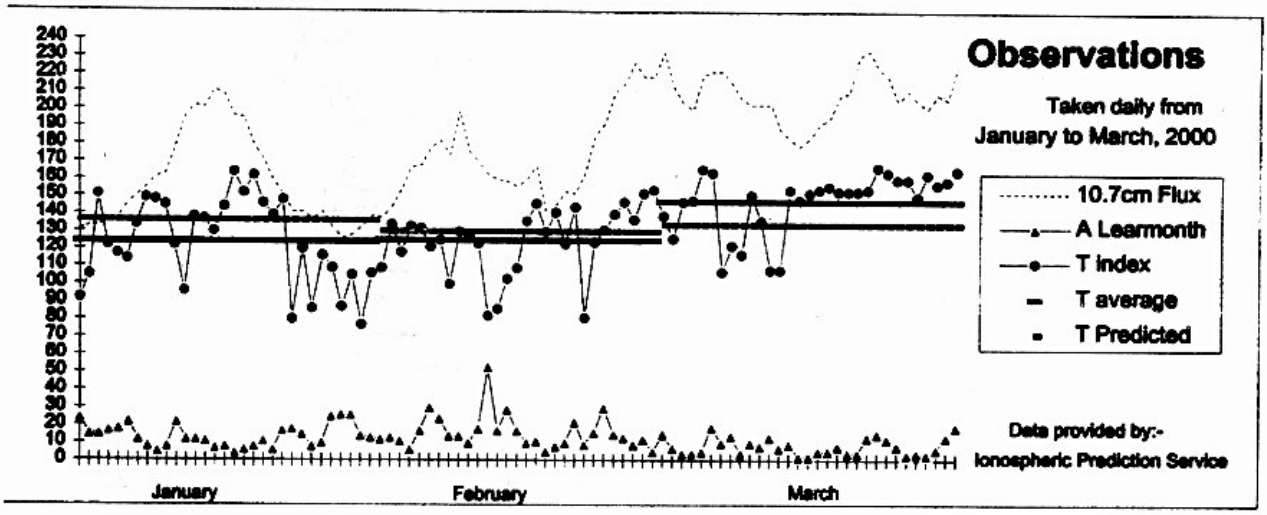
As we move into the times high in the sunspot cycle, this sort of activity will become more frequent and more extreme.

During the last quarter, solar activity followed the rotation of the sun. The rise and fall in the solar flux shows the 27 day solar rotation clearly. Flare activity also increased. Not only did the number of flares increase each month during the quarter, the strength of flares is also increasing. It adds to the volatility in conditions and is something to expect at this stage of the solar cycle.

Ionospheric conditions are also more variable. The Ionospheric Predictions Service has issued 26 HF Radio Communications Warnings during the quarter: 11 in January, 10 in February and 5 in March. HF warnings are issued to users requiring certainty in their radio circuits and so would not themselves be of interest to the radio amateurs. Volatility in conditions can mean an increase in the number of warnings correlating to an increase in the number of opportunities for communication on frequencies above the upper decile frequency which would interest amateurs more.







HF Predictions

by Evan Jarman VK3ANI
34 Alandale Court, Blackburn Vic 3130

These graphs show the predicted diurnal variation of key frequencies for the nominated circuits.

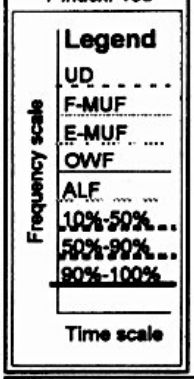
These frequencies as identified in the legend are:-

- Upper Decile (F-layer)
- F-layer Maximum Useable Frequency
- E-layer Maximum Useable Frequency
- Optimum Working Frequency (F-layer)
- Absorption Limiting Frequency (D region)

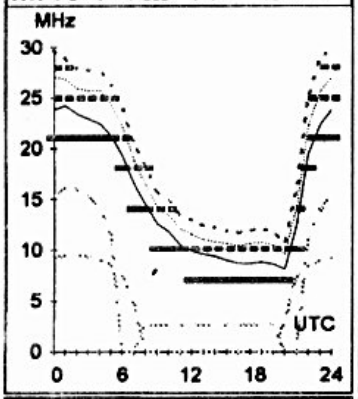
Shown hourly are the highest frequency amateur bands in ranges between these key frequencies; when usable. The path, propagation mode and Australian terminal bearing are also given for each circuit.

These predictions were made with the Ionospheric Prediction Service program: ASAPS version 4.

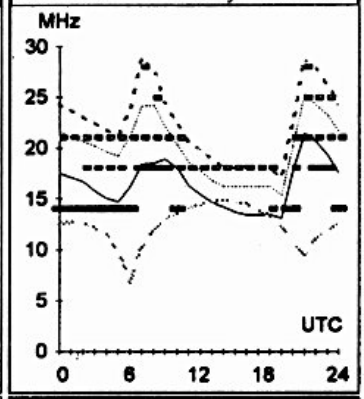
May 2000
T index: 133



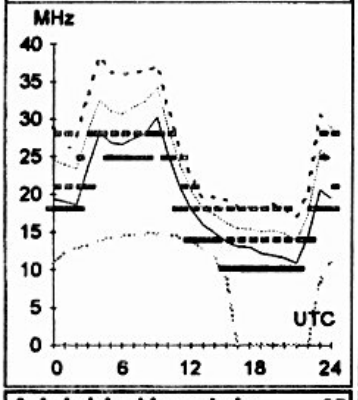
Adelaide-Auckland 104
Second 2F13-16 2E2 Short 3241 km



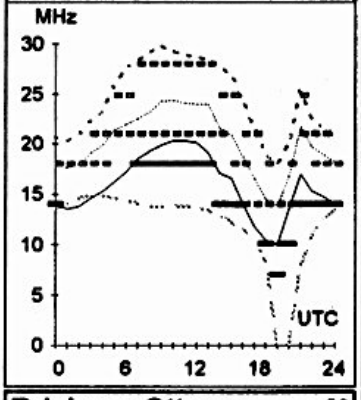
Brisbane-London 147
First F 0-5 Long 23498 km



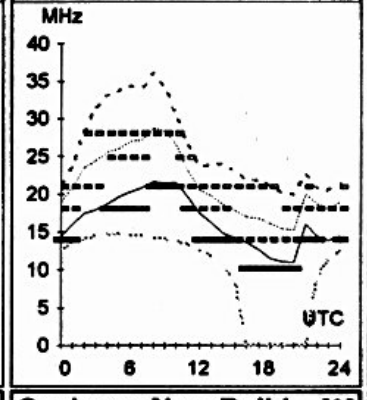
Adelaide-Cairo 288
First F 0-5 Short 13332 km



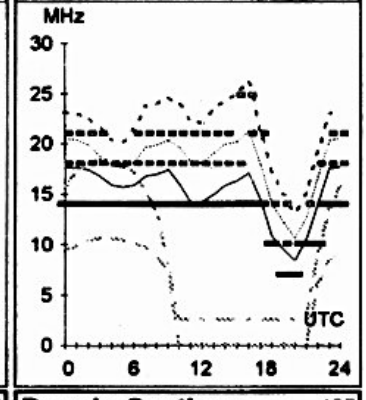
Brisbane-London 327
First F 0-5 Short 16526 km



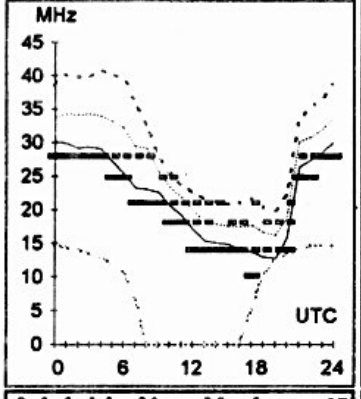
Canberra-Moscow 317
First F 0-5 Short 14481 km



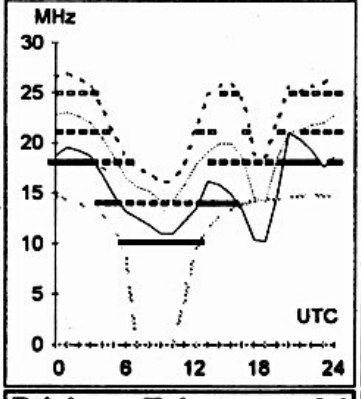
Darwin-Manila 340
Second 2F13-26 2E2 Short 3196 km



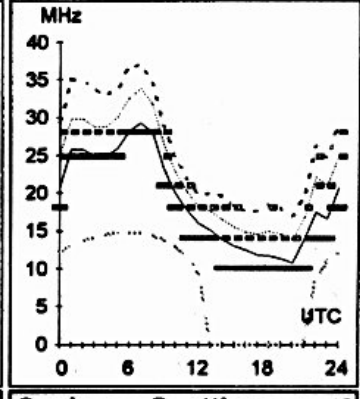
Adelaide-Honolulu 57
First 3F2-7 3E0 Short 9160 km



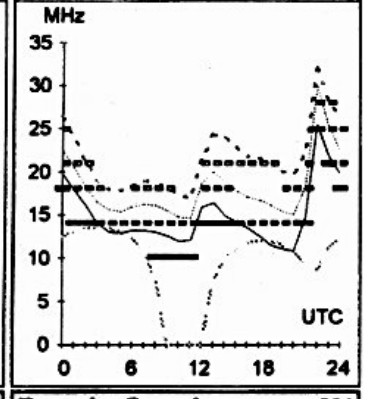
Brisbane-Ottawa 52
First F 0-5 Short 15307 km



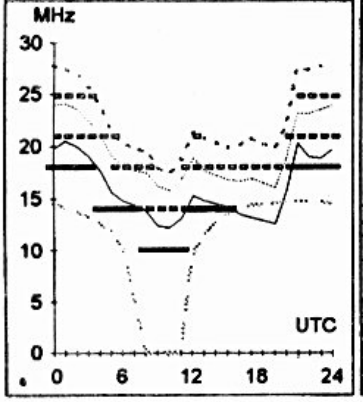
Canberra-New Delhi 303
Second 4F5-11 4E0 Short 10348 km



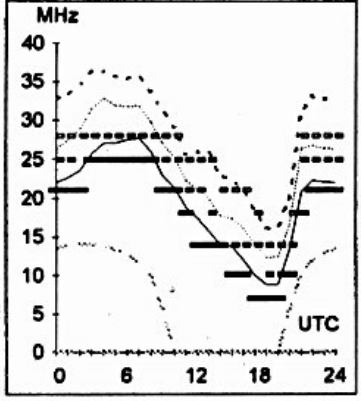
Darwin-Santiago 157
First F 0-5 Short 14422 km



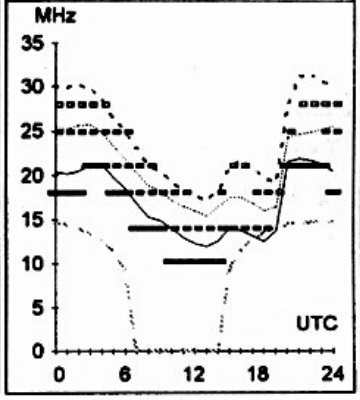
Adelaide-New York 67
First F 0-5 Short 17092 km



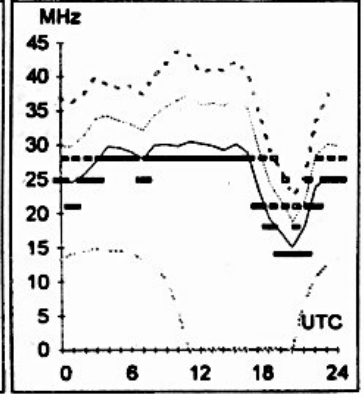
Brisbane-Tokyo 348
Second 3F6-13 3E0 Short 7159 km

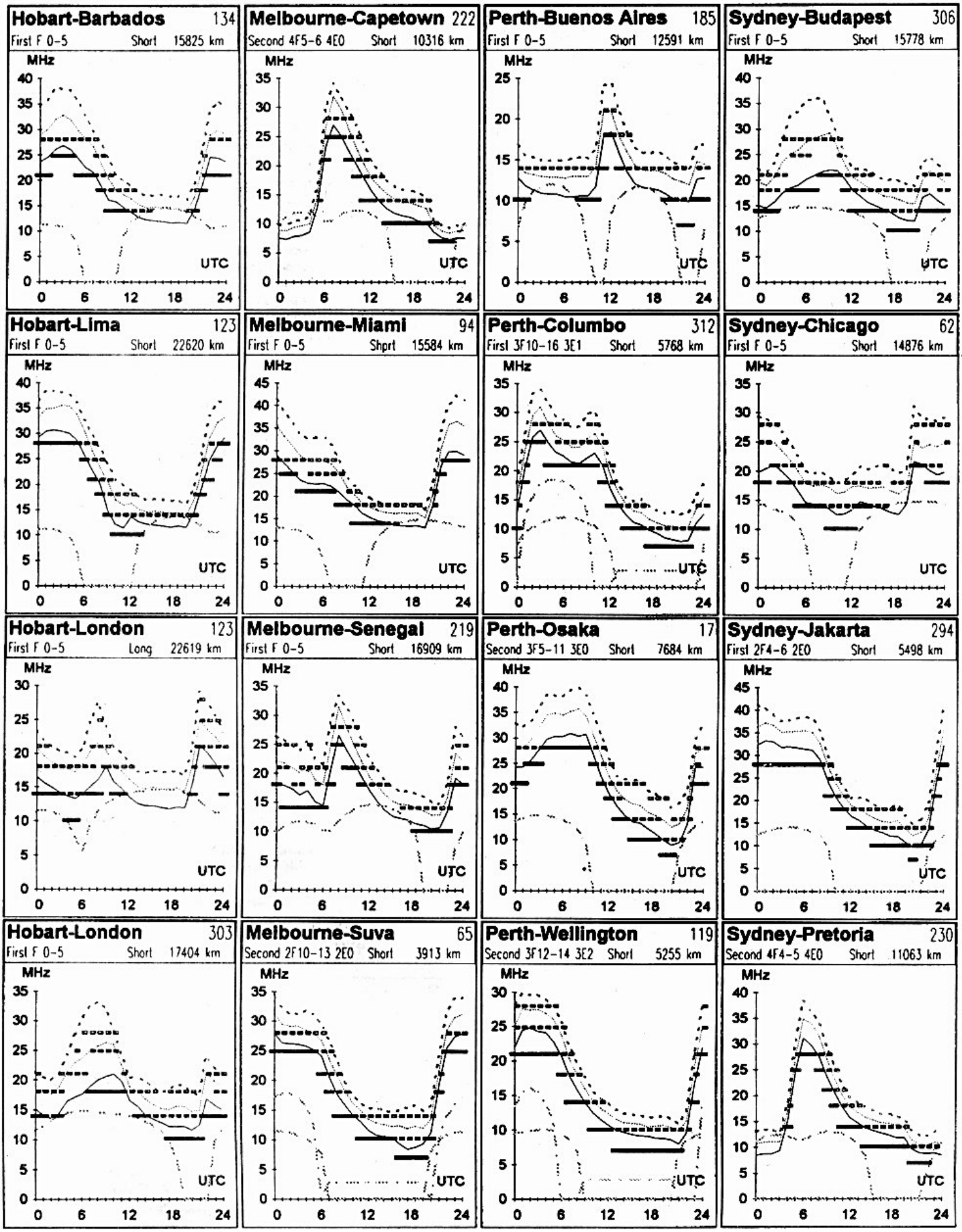


Canberra-Seattle 48
First F 0-5 Short 12709 km



Darwin-Seoul 356
Second 3F11-20 3E1 Short 5575 km




Hobart-Barbados 134
First F 0-5 Short 15825 km
Melbourne-Capetown 222
Second 4F5-6 4E0 Short 10316 km
Perth-Buenos Aires 185
First F 0-5 Short 12591 km
Sydney-Budapest 306
First F 0-5 Short 15778 km
Hobart-Lima 123
First F 0-5 Short 22620 km
Melbourne-Miami 94
First F 0-5 Shprt 15584 km
Perth-Columbo 312
First 3F10-16 3E1 Short 5768 km
Sydney-Chicago 62
First F 0-5 Short 14876 km
Hobart-London 123
First F 0-5 Long 22619 km
Melbourne-Senegal 219
First F 0-5 Short 16909 km
Perth-Osaka 17
Second 3F5-11 3E0 Short 7684 km
Sydney-Jakarta 294
First 2F4-6 2E0 Short 5498 km
Hobart-London 303
First F 0-5 Short 17404 km
Melbourne-Suva 65
Second 2F10-13 2E0 Short 3913 km
Perth-Wellington 119
Second 3F12-14 3E2 Short 5255 km
Sydney-Pretoria 230
Second 4F4-5 4E0 Short 11063 km
MHz
UTC

HAMADS

- Hamads may be submitted on the form on the reverse of your current Amateur Radio address flysheet. Please print carefully, especially where case or numerals are critical.
- Please submit separate forms for For Sale and Wanted items, and be sure to include your name, address and telephone number (including STD code) if you do not use the flysheet.
- Eight lines (forty words) per issue free to all WIA members, ninth and tenth lines for name and address. Commercial rates apply for non-members.
- Deceased estates Hamads will be published in full, even if the ad is not fully radio equipment.
- WIA policy recommends that the serial number of all equipment for sale should be included.
- QTHR means the address is correct in the current WIA Call Book.
- Ordinary Hamads from members who are deemed to be in general electronics retail and wholesale distributive trades should be certified as referring only to private articles not being re-sold for merchandising purposes.
- Commercial advertising (Trade Hamads) are pre-payable at $25.00 for four lines (twenty words), plus $2.25 per line (or part thereof), with a minimum charge of $25.00. Cheques are to be made out to: WIA Hamads.
- Copy should be typed or in block letters, and be received by the deadlines shown on page 1 of each issue of Amateur Radio, at:

Postal: *Newsletters Unlimited, 29 Tanner Street, Richmond, 3121*
Fax: *03 9428 4242* *E-mail: newsl@webtime.com.au*

Please only send your Hamad once
Please send Hamads by mail OR fax OR email (much preferred).
Please do not send by more than one method for any one ad or issue, it is confusing.

FOR SALE ACT

• **Icom** IC 725 All HF bands $800. IC120 Automatic Antenna Tuner to match $200. Alinco ARL-22HT 144 MHz 45 W $200. Yaesu YC55D frequency meter to 200 MHz $75. VK1ABU QTHR (02) 9328 1261 (AH)

FOR SALE NSW

• **6146W, 6146A, 6146B Tubes** (matched pairs) and 12BY7A Driver Tubes Phone 041311-4953 or email vk2slo@ausham.zzn.com

• **BOOK**: *Radiotelegraph and Radiotelephone Codes, Prowords and Abbreviations.* 2nd Edition. $16 posted Australia. 90 Pages. Q,X,Z Codes, 97 Phonetic, 20 Morse Codes. Phillips, Myer, 10,11,12,13 Codes. Much other info. Internet - http://www.nor.com.au/community/sarc/phonetic.htm VK2JWA, John W.Alcorn. QTHR. 02-66215217. Email jalcorn@nor.com.au

• **INTERNET** Connect from Port Macquarie to the Gold Coast from 80c per hour. Summerland Amateur Radio Club. For info - http://www.nor.com.au/community/sarc/sarc.htm Harry VK2XIO, QTHR, cascom@nor.com.au. PO Box 293, Lismore, 2480. Ph 02-66216096

• **Yaesu** FL2100B Linear amplifier serial no 8F290390, bands 80,40,20,15,10. Excellent condition, like new $550. John VK2DAF, Bega (02) 6492 1779

WANTED NSW

• **2 metre FM Transceiver** by disabled aged pensioner, radio OK if working or not. Solid state preferred. Also, HF SSB Transceiver any condition. Help me get back on air with that radio you no longer want or use! Norm VK2ZG QTHR (02) 4965 7923

• **Simplex Auto** Morse key (bug). Melbourne, Australia. Replies to- Email: jalcorn@nor.com.au J.W.Alcorn, VK2JWA. QTHR, Ph 02-66215217. Please give condition and price.

FOR SALE VIC

• **Huge Telephone Equipment Sale** on Sunday 4th. June at the Club rooms of Geelong Radio & Electronics Society (VK3ANR) Unit B Plantation Reserve 237a High St. Belmont 3216 Melway Ref. 227 J10 or 451 H12. Over 160 items including ,Group Selectors, Final Selectors, Magneto Ringers, Modems, Commander Systems, lamps, Test Equipment, Tools, Insulators, 10 Line Manual Exchange, Phones, Power Supplies and much more.Viewing from 10 am, sale commences 1pm.Visit our Web Site http://www.pccare.com.au/~keithv for more info.or phone Keith (sec) 0352435184 or E-Mail to markes@netlink.com.au

• **Shack Clearance. Yaesu** FT23R 2m hand-held, one owner. Charger, car adapter/charger, mic/head-set, handbook etc, s/n 71764 $200. **Yaesu** FT7, 80-10m. Works OK but needs TLC on 20m. Inst. manual s/n 90672 $200. **Scanner** Uniden UBC9000XLT auto-scanner 25-1300 MHz. One owner c/w discone antenna, Vic frequency guide, Instruction manual. Suit new buyer s/n 55000381, original packing $400. **Sangean** 10 band transistor radio, AM/FM/Stereo s/n 40152315 $20. **Icom** IC22S 2m, has external switching mod., mobile bracket etc. Needs TLC. Original packing, s/n 13650 $100. **Icom** IC251A 2m all-mode. Looks good, listens, but won't talk Hi (pll fault?) s/n 3028 $250. **Kenwood** TR7400A 2m FM xcvr. 5/35 W Mobile bracket. You dial up the desired freq. and off-set. A good piece of gear. Original owner and packing, s/n 560812 $200. **Frequency counter** Topward Model TFC-1207 10 Hz - 1GHz, s/n 830918 $130. **Cubical Quad antenna**. The original 'boomless' 2 el - 3 band (20/15/10) quad. Excellent performer, built in 1959. Needs 2 new bamboo spreaders and lots of TLC. Will swap for anything useful. Offers will be considered for any of the items above mentioned. Bob VK3AQK QTHR Ph (03) 5744 1676. Email: bobrae@globalfreeway.com.au

WANTED VIC

• **Solid state Deltahet** receiver as featured in *Electronics Australia* in 1971. There must be somebody out there that built one. Fred VK3JM (03) 9801 4972

FOR SALE QLD

• **Kenwood TS-450S**. Excellent Condition ATU $1000, s/n 31200094. Ph (07) 5463 5670

• **JRC** NRD-525 HF-comm rcvr with 0.5 kHz filter, NVA-88 speaker, manual, exc condx $1200 ono. **POCOM** AFR-1000 autom. Baudot TOR RTTY decoder $250 ono. **Monitor** MONACOR b & w 12" $150 ono. Hans L40370 (ex HS1ALK) ph (07) 5479 4561

• **Werner Wulf's** 5 el Tribander 13 ft boom 10-15-20m similar to TET SH35C. See *Amateur Radio*, June 1981 $350. VK4AIU (07) 4630 0387 QTHR

• **Muirhead** facsimile transmitter model D-901-B/S and receiver with power supply model no D-900-B/S G.C. $75. Gwen VK4CB QTHR (07) 3202 7137

• **Yaesu** FT-7 transceiver, 80, 40, 20, 15,10, analogue, 10 W s/n 8J100467, excellent condition, suit beginner or QRP, $300 or near offer. Doug VK4OE (07) 3391 5526 (H), (07) 3234 1169 (W) QTHR.

• **Kenwood** TS-440S Transceiver (Auto ATU), PS-50 PSU, MC50 desk mike, MC42S up/down hand mike, $1000. **Mini-Multi** MSC-33 beam Antenna for 20/15/10 metres, $150. **Light weight antenna rotator**, control unit and 25 metres 6 strand cable, $60. **Aluminium winch-up tower** (AR November 1981), but built in 1998 with added safety features, $1000. Manuals for all. **Yaesu** FT2 Auto Transceiver, $100. **100 metres** near new RG-213 Co-ax Cable, $200. Bill VK4AWD QTHR 0407 484 939

WANTED QLD

• **WWII Services Amenities Receivers**, Australia Sound System Type V5, AWA Type 17020, Stromberg Carlson Type 6A15, Kriesler Model No 1167, also AMR 100 Comm. Rx, and MCR1 Receiver. Ray VK4FH, PO Box 5263, Daisy Hill 4127. Ph (07) 3299 3819, fax (07) 3299 3821

• **Motor** required for Daiwa MR-750 Rotator. Motor labelled 'Normal Speed Type MR-750' Keith VK4TT QTHR (07) 3396 5249 vk4tt@bigpond.com

• **Radio tower** 30 - 40 ft. Queensland only. Ph 0741298296 or email dm622@satcom.net.au

WANTED SA

• **Loudspeaker**, Goodmans 15 Watt 15Ω type Akiom 150 MkII, Philips valve colour TV, probably Model X25k, year approx.1969-70. Tektronix ISI Sampling unit. Tektronix probes P6032 & 6034. Adaptor for GR plug to UHF socket. Wallposters of Philips Delta Gun and 20ax self converging C.R.T.S. Ph (08) 8520 2988

• **Theo Barker** *Signals, A history of the Royal Australia Corps of the Signals 1788-1947* The Royal Australian Corps of Signals Committee, 1987. **Theo Barker**, *Craftsment of the Australian Army: The story of RAEME* Crawford House Press Pty Ltd, 1992. Tony VK5UA QTHR or AH (08) 8269 4095

FOR SALE WA

• **Antenna Emtron** TE-23M threeband mini-beam, 6m mast, roof mounting guys $300 ono.

Peter VK6BCC QTHR 08 9447 7005 Email: robinson@starwon.com.au

• **Shack Clearout - moving. Kenwood** TS430 FM Fitted $700 ono. **Yaesu** Ft707 $500 ono. Both excellent condition C/W handbooks cases. **Two AWA Forestphones** handbooks unmodified $50 each. Six position quality **coax switches** $50 each. Three drawer **operating table** vinyl top $100. Two superb **Morse keys**. Much QRP Gear ATUs SWR meters Vellaman P/S Kit. Much construction material available, many giveaways with purchases. Keith VK6KC QTHR (08)9528 3336 anytime

WANTED WA

• **Power transformer** for Yaesu YO-901 Multiscope or unserviceable unit with good transformer. VK6ABS QTHR Ph (08) 9075 4136

FOR SALE TAS

• **2mTR 30w Power Amplifier.** Gavin VK7HGO Ph. 03 62724437 Mobile 0407724431 email vk7hgo@ mail.com

• **Tono** 150 2 metre linear amp SSB FM CW, good cond. **Twin** Meter HF power SWR. **Oskeabloch** HF-2m SWR power meter. **Kenwood** IH78A 2m/70cm handheld t/ceiver, mint, complete SM33 spkr mic, BT8 Dry Cell Case, cig power adaptor, also computer access. Ph David VK7ZDJ (03) 6425 2030 or 0413 219 680

• **Yaesu FT 3000m Service & Tech Manual**, new $40. Dentron GLA1000 HF Linear 600 W O/P 80-10meters. Yaesu FRA 7700 active ant. suit Yaesu & all receivers $40. Two metre wide band base ant. 137-174 MHz, new, low SWR $85. Allen VK7AN (03) 6327 1171 or 0417 354 410

MISCELLANEOUS

• FREE if you dismantle and remove TH3 Mk3 Three element Thunder Bird antenna and 30 ft tower. No longer required. Vic VK5AGX QTHR (08) 8258 0412

•If you got your licence before 1975 you are invited to join the Radio Amateurs Old Timers Club. A $2.50 joining fee plus $8.00 for one year or $15.00 for two years gets you two interesting Journals a year plus good fellowship. Arthur Evans VK3VQ or Allan Doble VK3AMD can supply applications forms. Both are QTHR in any Call Book.

• The WIA QSL Collection (now Federal) requires QSLs. All types welcome, especially rare DX pictorial cards, special issue. Please contact the Hon Curator, Ken Matchett VK3TL, 4 Sunrise Hill Road Montrose VIC 3765, tel. 03 9728 5350.

ADVERTISERS INDEX

OVER TO YOU

VK2EZQ/MM Electronic Mail via Radio

My unlicenced partner, Sue and myself, Ted VK2EZQ (G4TBF) are travelling on a 34ft yacht. The *Alice Colleen* of Montreal. In 1997 we came across Howard, KF7AZ, during our travels and he showed us how he was using Pactor to send messages home using the internet.

I would like to explain what I do and connect it with packet. My knowledge of packet activity in Australia is limited because I mostly operate Pactor on HF in order to send messages to "Nexus" (which is the internet). When I am in VHF range I can also use VHF packet Bulletin Boards (BBS) or Packet Repeaters to send my messages to "Netlink" MailBOxes (MBO). The operator of the MBO stores my message and sometime later will forward it via the internet to the address I advise. This message can be received by a person who is not an Amateur. The non amateur can send back a message via the same route.

We currently correspond with our relations in the UK and various ham and non ham friends via this method. While we were on our last overseas voyage from Newcastle NSW to Noumea Port Vila and Bundaberg at one point we experienced 6 days of gale force winds in the Tasman Sea. In this case it was a little uncomfortable to type on the keyboard so we reverted to the backup. Using Tony's maritime net on 14315 at 2100UTC I made voice contact with Keith VK2CKH near Jervis Bay. Keith sent out a short bulletin on internet email which reached all our predetermined mailing list. One friend was quite intrigued to receive a message from a storm tossed Tasman Sea, while he as touring in the Pyrennees mountains. The backup system came in usefull for a time of the voyage when the PK232MBX Terminal Node Controller (Modem) released its "smoke" and I was not able to catch all of it. Luckily amongst the spares kit was a circuit for the modem and 2 spare RS232 interface chips which are socketed in the PK232MBX. Some burned ground trac! had to be replaced with cable and the Modem worked again. During the voyage I operated FK/G4TBF from New Caledonia waters and YJ0AZQ from Vanuatu waters.

If anyone has a PK232MBX and wants to try out operation on PACTOR be advised that the earlier versions do not have firmware to support that mode. Perhaps the required information will be the subject of a further piece as will the details of sending internet email to non hams using Packet/Pactor via Nexus.

73 de Ted, VK2EZQ/MM, QTHR
Internet: vk2ezq@amsat.org {plain text format messages only}
Packet: \I "ne.nsw.aus.oc"Vk2ezq@vk2age.#ne.nsw.aus.oc
This message was sent from Pittwater via 7047.1 lsb to VK2AGE in Lismore.

NOTICE: Mail to the sender of this message is via a (slow) radio link. PLEASE be brief and send only PLAIN TEXT. Consult the help file for your EMail program for information on how to send Plain Text messages. Also DO NOT copy the sender's messsage text back to them.

Processed by Amateur Radio Station W9MR, w9mr@midwest.net using NetLink (c) 1996-99, W5EUT, KN6KB .For Help - http://www.win-net.org

TRADE ADS

• **AMIDON FERROMAGNETIC CORES:** For all RF applications. Send business size SASE for data/price to RJ & US Imports, PO Box 431, Kiama NSW 2533 (no enquiries at office please ... 14 Boanyo Ave Kiama). www.cyberelectric.net.au/~rjandusimports Agencies at: Assoc TV Service, Hobart: Truscotts Electronic World, Melbourne and Mildura: Alpha Tango Products, Perth: Haven Electronics, Nowra

• **WEATHER FAX programs** for IBM XT/ATs *** "RADFAXZ" $35.00, is a high resolution short-wave weather fax, Morse and RTTY receiving program. Suitable for CGA, EGA, VGA and Hercules cards (state which). Needs SSB HF radio and RADFAX decoder. *** "SATFAX" $45.00, is a NOAA, Meteor and GMS weather satellite picture receiving program. Needs EGA or VGA & WEATHER FAX PC card, + 137 MHz Receiver. *** "MAXISAT" $75.00 is similar to SATFAX but needs 2 MB of expanded memory (EMS 3.6 or 4.0) and 1024 x 768 SVGA card. All programs are on 5.25" or 3.5" disks (state which) plus documentation, add $3.00 postage. ONLY from M. Delahunty, 42 Villers St, New Farm QLD 4005. Ph 07 358 2785.

OVER TO YOU

An open forum for members' comments
Please keep letters short: brevity gets priority

CW and Other Things Amateur

Dear Sir,

CW or No CW ? That is the question! I write this in response to Ian Godsil's article (AR, Feb 2000, p19)

I am currently studying Morse code in preparation for the final stages of AOCP. There is much discussion about the requirement of Morse code at 10 wpm, and I am tempted to take the soft option and wait for the requirement to be dropped or lowered, which seems likely. However, I will persist and I intend to master Morse code for a number of reasons.

It is my belief that if something is worth having, then it is worth working for. To require Morse code for AOCP is part of a process that restricts the amateur bands to those who are prepared to earn the right to use them. In my opinion it requires a certain determination, to win that privilege, and having been won, makes it more appreciated and valued. In my opinion, therein lies the crucial difference between the amateur bands and citizens band. I realize that this is an opinion with which others may disagree.

Secondly, some argue that there is no need to learn Morse because it is no longer an internationally recognized form of communication. After all we have mobile phones, satellite phones, GPS and other forms of technology that make CW unnecessary and obsolete. Computers can be programmed to read and write Morse code. I have even heard that computers can read Morse code in one language and display the text on the screen, translated into another language. The argument goes that if computers can do that then there is no need for amateurs to become proficient in Morse.

Well, that may be so, but what an incredible reliance on technology!

In domestic telecommunications, much use is made of "microwave links" to carry the calls. I have been advised that the microwave dishes must be precisely aligned for this technology to function smoothly. In fact, that if there is an aiming error of a mere 2° the communication system will fail. One can only ponder how much greater is the precision and technology required to maintain the satellite communication network.

We know that this is modern technology, and nothing can possibly go wrong... go wrong... go wrong... go ... errrr. We have been assured that because the "lessons have been learnt", and communications have been upgraded, that we could never have another "Ash Wednesday", and we were told that because the Titanic was unsinkable, lifeboats were unnecessary!

The truth is that we are extremely vulnerable. A small earthquake here, a bit of terrorism there and suddenly the marvellous technology collapses into a heap of twisted, metallic junk. What then?

It is a simple project to build a direct conversion transceiver, mostly from salvaged parts, that it could be made small enough to fit in a shoebox and that using CW with 5 watts output one could "work the world". Assuming, I guess, that there is at least one other operator out there who can read Morse code! (Two circuits have been published in AR recently viz: AR Dec 99, p30, AR Jan 2000, p6)

Amateurs have played a significant role in the past during civil emergencies and disasters. (See for example AR Dec 99 p21) This is a contribution to our society that I value and cherish. I would hate to see this role die out.

The very fact that Morse code is no longer recognized as an international form of communication is the VERY BEST reason that CW should remain a requirement for the AOCP. It may well be needed in the future and we may yet rue the day of its demise.

I am not swayed by the argument that the numbers of amateurs are dwindling and therefore we need to make it easier for amateurs to become licensed. Using the same argument, would we lower the standards of medicine to attract more doctors? No! Nor should we.

Nor do I accept the argument that it is Morse code that is deterring potential amateurs. There are many competing alternatives to amateur radio, one does not need much prompting to recognize these. Mobile phones and satellite communications have already been mentioned. In addition there is STD, ISD, the Internet and email.

Amateur radio will never compare favourably with these other forms of global communication if one focuses on convenience, reliability, cost and clarity. "Cost?" you ask, "Isn't amateur radio free?" When one considers the cost of setting up a radio shack, antennas, radios, maintenance, and licensing fees etc. the Internet wins hands down. Of course once it is all set up the price per minute goes down with amateur radio.

No, the strength of amateur radio is its technical *simplicity* not its technical superiority. Some may have become amateurs because they enjoy talking to the world. If that was their only motivation – to talk to the world, then they may be happier using the Internet or other technologies. They will probably be lost to other technologies whether or not Morse remains. Amateur radio is MUCH more than "talking to the world". It's the fascination of connecting a few scraps of wire and a few rudimentary components; the home brewing; the ability to operate *without* a reliance on technology.

The challenge is to attract more of those who would be amateurs, for what are the strengths of amateur radio. The challenge is to resist the attempt to revive amateur radio by lowering standards.

Finally, there is a lot of comment regarding congestion on various bands, and requests are made for allocation of more of the spectrum. Since CW is extremely economical in terms of band width surely its use should be encouraged and facilitated in order to ease congestion.

Sincerely yours,
Rick Lloyd.

Address all letters to the editor:
PO Box 2175
Caulfield Junction 3161
edarmag@chariot.net.au

YAESU'S DONE IT AGAIN

Yaesu FT-100 Ultra-compact HF/6m/2m/70cm Mobile

AMAZING SCOOP PURCHASE VALUE!

Now you can enjoy the fun of operating on all bands from 160m to 70cm, either at home or in your car, and at a fantastic Yaesu price.

The new Yaesu FT-100 features HF/6m/2m/70cm transmitter coverage with 100W RF output on HF and 6m, 50W on 2m and 20W on 70cm, plus you can easily mount the detachable front panel using an optional lead (YSK-100) for more convenient mobile installations. Powerful interference fighting features such as a DSP based Bandpass filter, Notch filter and Noise reduction, together with an IF based Shift control, all aid reception quality during tough conditions. A Speech Processor and VOX facility are provided for SSB users and an internal Electronic keyer is provided for CW operation. Also included are Dual VFOs, built-in CTCSS encode, 300 memory channels, all-mode operation (SSB, CW, AM, FM, AFSK, Packet* 1200/9600bps), 100kHz-970MHz receiver (cellular locked-out), and options for additional AM and CW IF filters.

The FT-100 is supplied with an MH-42B6JS hand mic, DC power lead and comprehensive instructions.

D 3285

YSK-100 remote front panel lead. **$155**

D 3286

YAESU

Included as standard:

- Digital Signal Processing on both transmit and receive
- Effective IF noise blanker
- Electronic CW keyer with 50 character message memory
- Spectrum Scope function
- Massive receiver coverage (100kHz – 970MHz, less cellular)

$2499 SAVE $376

2 YEAR WARRANTY

Offers expire 31/5/2000.

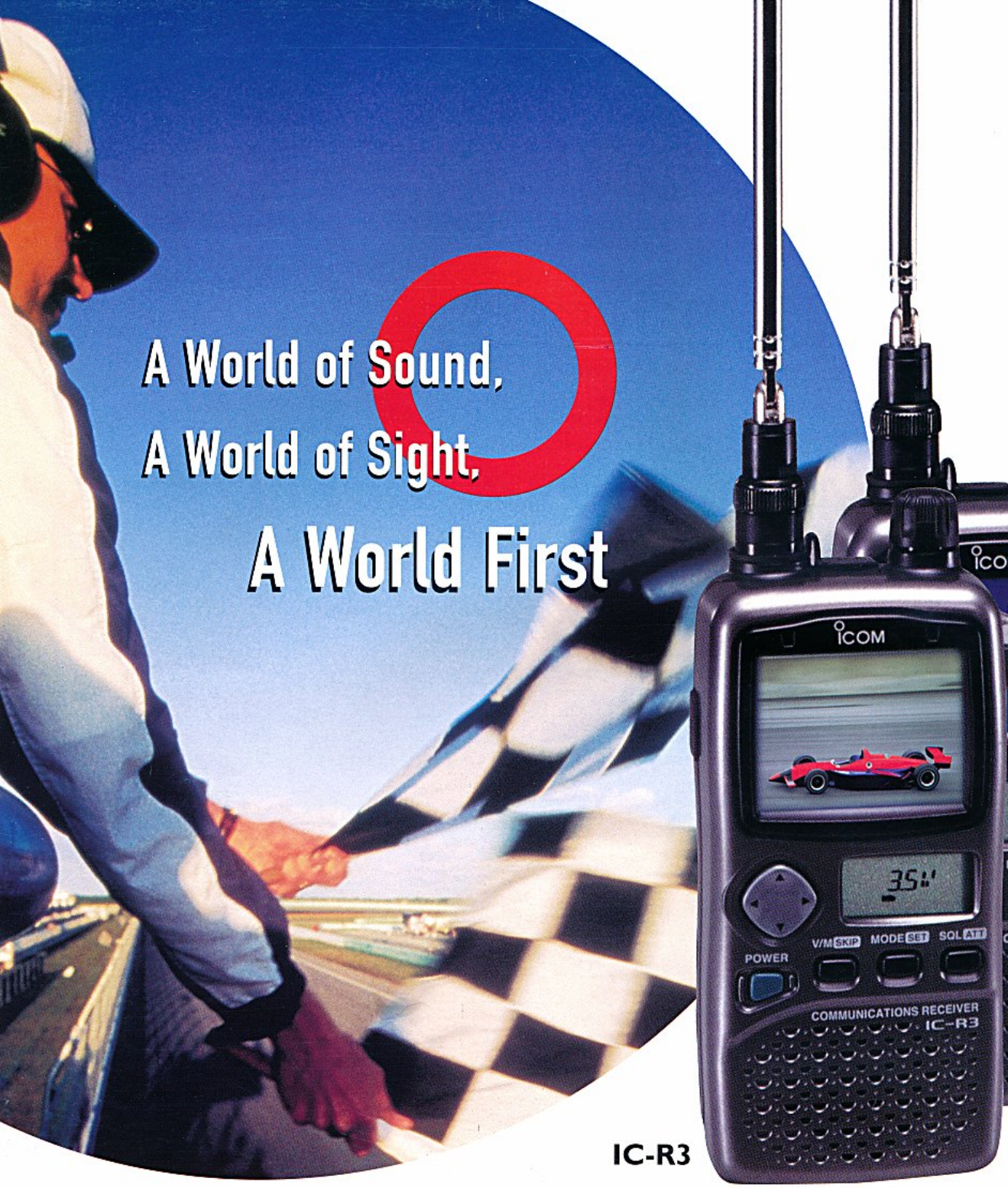
DICK SMITH ELECTRONICS

That's where you go!

* *Requires third party TNC*

915 IBC 4 col.

A World of Sound,
A World of Sight,
A World First



IC-R3

The Ultimate Handheld Receiver is here!

A first for a handheld communications receiver... a 2 inch TFT colour screen! With super wide 0.5-2450 MHz frequency coverage for AM, FM, wide FM and TV picture reception. LCD shows information such as receiving frequencies, tuning steps, and memory channel numbers.

Loaded with features like signal strength level indication, band scope, high speed scanning, a multi-function 'joy stick' switch, 450 memory channels and more. A long life Lithium-Ion battery is supplied but the unit is also alkaline battery ready. Discover the IC-R3's world of sight and sound for yourself soon...it's another first from Icom!

2 YR WARRANTY For the name of your nearest accredited Icom Dealer call Icom on 1800 338 915, or visit our website at www.icom.net.au

ICOM
RECEIVERS
Clearly Ahead